ORDER NO. VRD9007M147

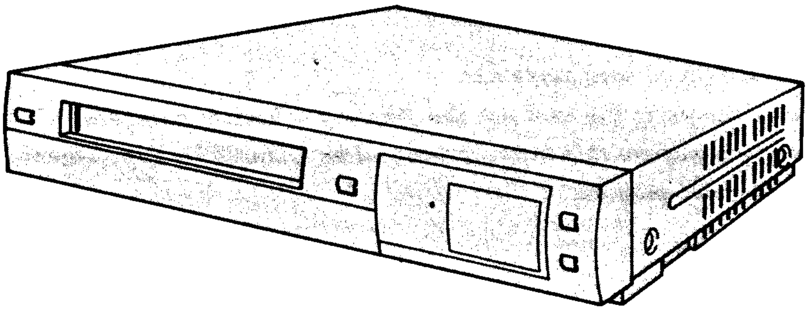
Service Manual

Video Cassette Recorder

Panasonic VHS PAL HQ

NV-J33EG

General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List



SPECIFICATIONS

ITEM	SPECIFICATION
POWER	SOURCE: 220V 50/60Hz
	CONSUMPTION: 22W
RECORDING SYSTEM	2 rotary heads, helical scanning system
	PAL
TV TUNER SYSTEM	VHF I : CHE2~CHE4 VHF III: CHS4~CHE12 VHF H: CHS11~CHS20 (PAL/SECAM B) 75Ω unbalanced UHF: CH21~CH69 (PAL/SECAM G) 75Ω unbalanced
RF OUT SYSTEM	UHF: CH36±4 (PAL/SECAM G) 73^{+2}_{-3}dBμ, 75Ω terminated
VIDEO	HEADS: 3 rotary heads 1 pair for recording, playback (L-R heads) 1 pc. for trick play (L′ heads)
	INPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω terminated
	OUTPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75Ω terminated

ITEM	SPECIFICATION
AUDIO	HEAD: 1 Stationary head (Normal Audio)
	INPUT: EURO AV Connector (21 pin) More than −10dBV (316mV), more than 10kΩ
	OUTPUT: EURO AV Connector (21 pin) −6dBV (500mV), Less than 1kΩ
TAPE FORMAT	VHS Cassette tape (Tape width 12.7mm)
TAPE SPEED	23.39mm/s Record/Playback Time: 4 hours with 240min. type tape FF/REW Time: 5.5min. with 180min. type tape
DIMENSIONS	380(W)×82(H)×345.5(D)mm
WEIGHT	4.9kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Infra-red remote controller (Build in Digital Scanner type) 1 pc. Programme Sheet 1 pc. AC Cord

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

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INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.
Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...
Section 4 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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REMARKS:

1. It is possible to receive, record and playback colour broadcasts from East Germany (DDR) on this video recorder.
2. When a video tape that was recorded with a colour TV broadcast from Eest Germany on this VTR is played back on a SECAM (France) or on a PAL VTR, the picture may be in black and white.
3. When a video tape recorded on a SECAM (France) VTR or a SECAM (France) pre-recorded video tape is played back on this VTR, the picture is in black and white.

SERVICE INFORMATION

1-1. HOW TO CHECK THE CRACKED CHIP PART

(1) Apply heat to the soldered portions of chip part using a soldering iron for about 2–3 seconds.
(2) If the chip part is faulty, it will be broken or cracked.

Caution: Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

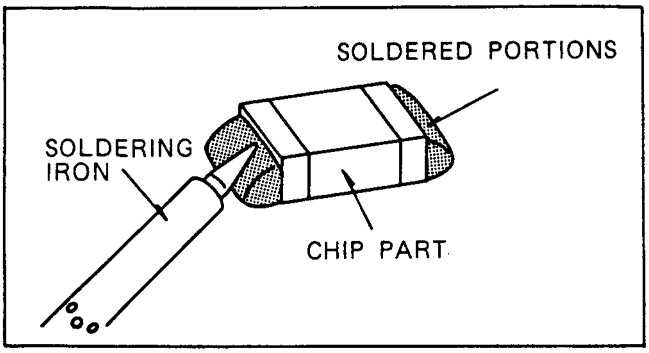

SOLDERED PORTIONS
SOLDERING IRON
CHIP PART

FIG. G1

Note: Regarding intermittent faults
The main causes of these faults are poor soldering and cracked chip parts.

1-2. HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

(1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.

(2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

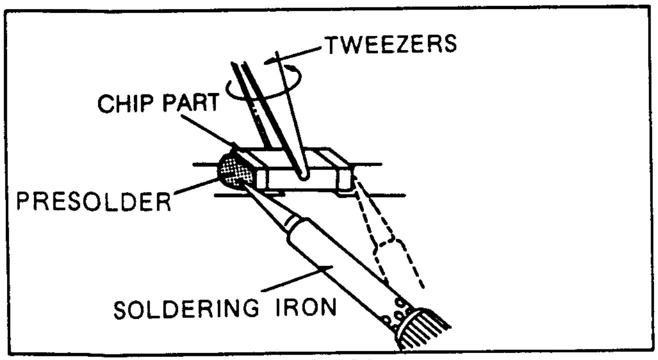

TWEEZERS
CHIP PART
PRESOLDER
SOLDERING IRON

FIG. G2

2) REMOVAL (transistor, diode, etc...)

(1) Grasp the chip part with tweezers and melt the solder of one lead.

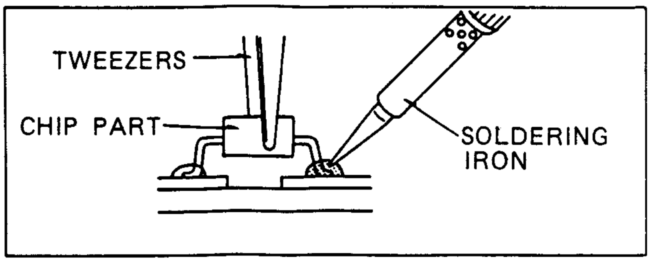

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G3

(2) Lift the side of that lead upward.

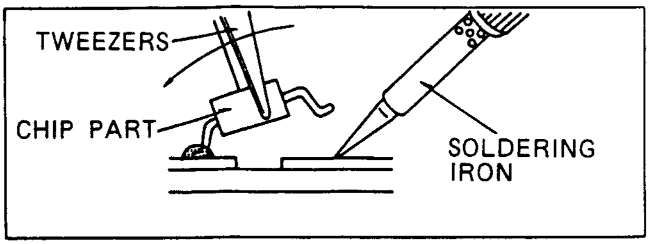

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G4

Caution: Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

(3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

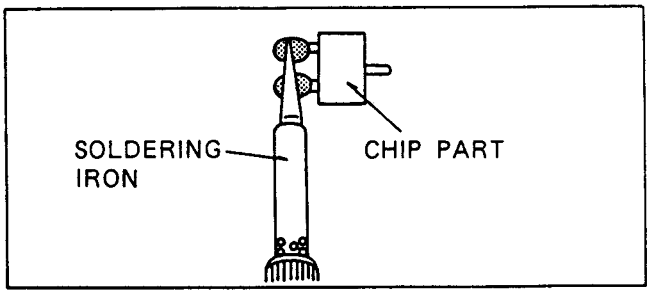

SOLDERING IRON
CHIP PART

FIG. G5

3) INSTALLATION

(1) Presolder the one side of contact point on the circuit board.

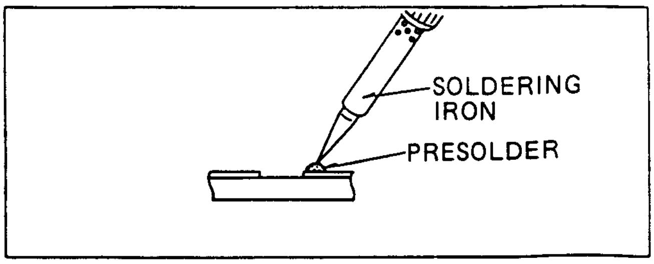

SOLDERING IRON
PRESOLDER

FIG. G6

(2) To install the chip part,hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
(3) Solder the other side of the chip part.
(4) Check your soldering.

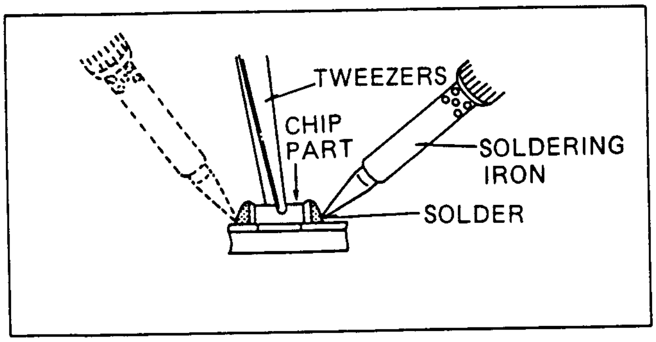

TWEEZERS
CHIP PART
SOLDERING IRON
SOLDER

FIG. G7

1-3. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

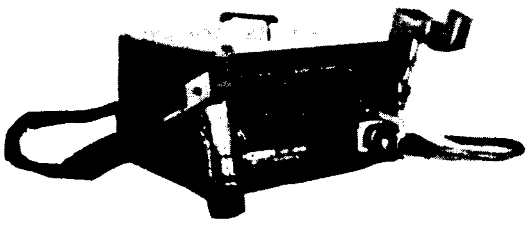


FIG. G8

(1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5 ~ 8 seconds.

(2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution: Do not supply the hot air to the chip parts around the Flat-IC for long time as as damage may occur to the chip parts around the Flat -IC.

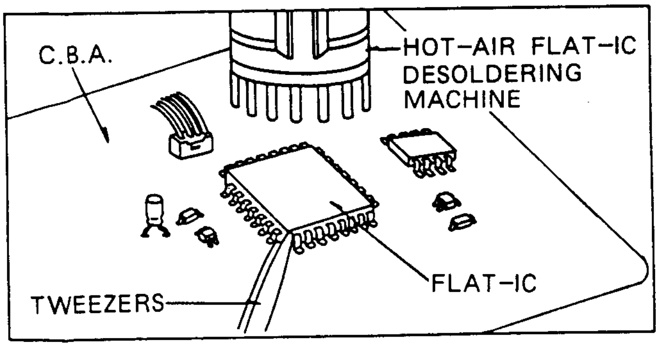

C.B.A.
HOT-AIR FLAT-IC DESOLDERING MACHINE
FLAT-IC
TWEEZERS

FIG. G9

(WITH SOLDERING IRON)

(1) Using solder braid remove the solder from all pins of the Flat-IC.
When you use the solder flux which is applied to all pins of the Flat-IC,you can remove it easily.

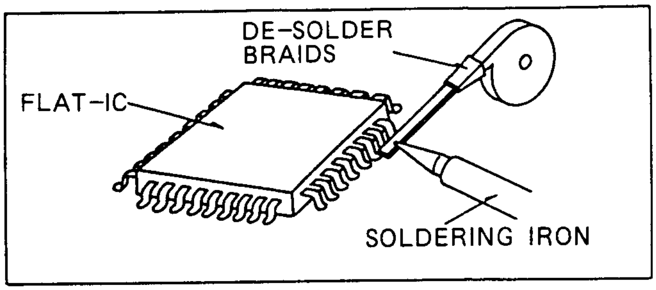

DE-SOLDER BRAIDS
FLAT-IC
SOLDERING IRON

FIG. G10

(2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire),while heating the pins using a fine tip soldering iron or a hot air blower.

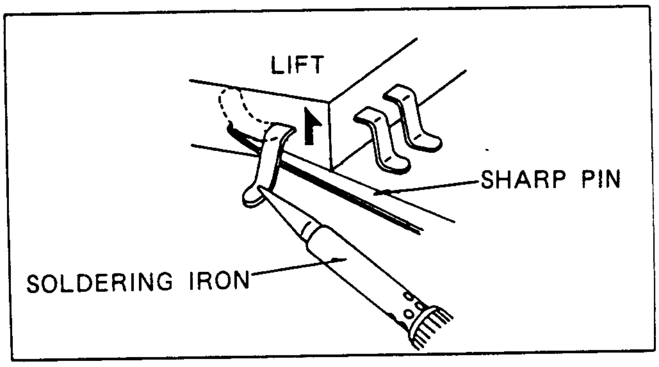

LIFT
SHARP PIN
SOLDERING IRON

FIG. G11

(WITH IRON WIRE)

(1) Affix the wire to workbench or solid mounting point as shown in FIG.G12.
(2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad,while heating the pins using a fine tip soldering iron or hot air blower.

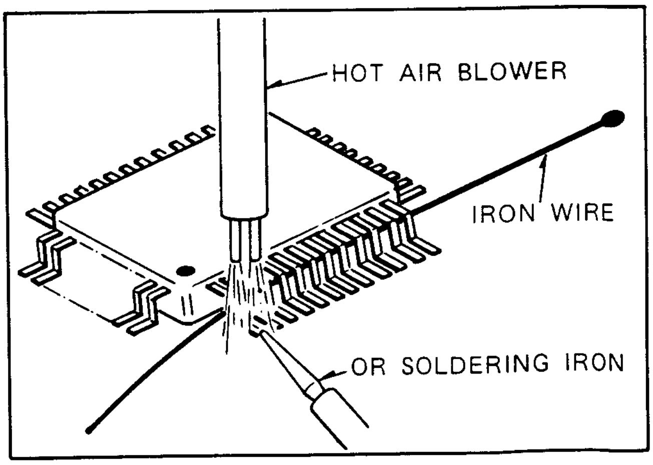

HOT AIR BLOWER
IRON WIRE
OR SOLDERING IRON

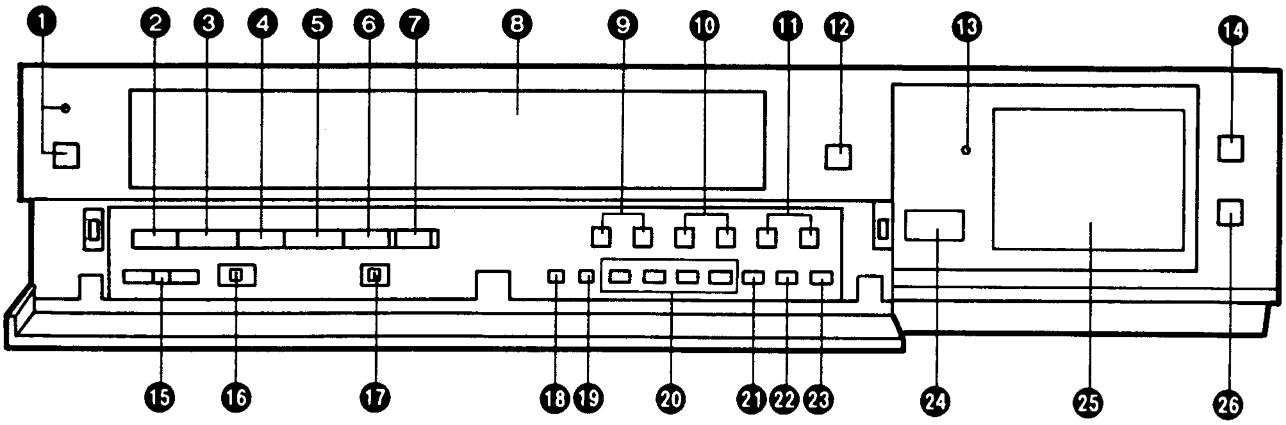
FIG.G12

Note: When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

SECTION 1
GENERAL DESCRIPTION

1-1. CONTROLS AND COMPONENTS

FRONT



① VTR On/Off Switch with Indicator

② Rewind ◀◀/Review ⇦ Button

③ Play/×2 Button (▶)

④ Fast Forward ▶▶/Cue ⇨ Button

⑤ Stop Button (■)

⑥ Pause/Still Button (❚❚)

⑦ Record Button (●)

⑧ Cassette Compartment

⑨ Channel Selection Up and Down Buttons

⑩ OTR On Buttons

⑪ OTR Off Buttons

⑫ Eject Button (⏏)

⑬ Digital Tracking Indicator

⑭ Clock/Counter Selector

⑮ Picture Sharpness Control

⑯ Noise Filter/Edit Selector

EDIT ON: For editing operations such as dubbing.
OFF: For ordinary use of the VTR.
NOISE FILTER ON: For playback of tapes with inferior picture quality caused, for example, by repeated dubbing.

- When the Noise Filter/Edit Selector is set to "EDIT ON", the picture sharpness cannot be adjusted with the Picture Sharpness Control.

⑰ Digital Tracking On/Off Switch

Digital Tracking
ON: Select this position for digital tracking.

When playback is started after inserting a cassette, and the VTR is turned on, the Digital Tracking function will be activated automatically, the Digital Tracking Indicator will flash for several seconds, and the tracking will be adjusted automatically (after the adjustment, the Digital Tracking Indicator will remain lit).

- During playback, the Digital Tracking function will be activated whenever the playback changes over from an unrecorded part to a recorded part, provided the recorded part is longer than 4 seconds.

- When the picture is distorted by noise bars, press the Tracking (+) or (−) Button to select manual tracking and adjust with these two buttons. The Digital Tracking Indicator goes out.
  To change back to Digital Tracking, press the Tracking (+) and (−) Buttons simultaneously.

Manual Tracking
OFF: Select this position for manual tracking.

- When the playback picture is distorted by noise bars, adjust by pressing the Tracking (+) or (−) Button.
- To return the tracking control to the former setting, press the Tracking (+) and (−) Button simultaneously.

⑱ Clock Button

⑲ Preset/Fine/Normal Button

⑳ Timer Controls

㉑ AFC/VPS Button

㉒ Clear Button

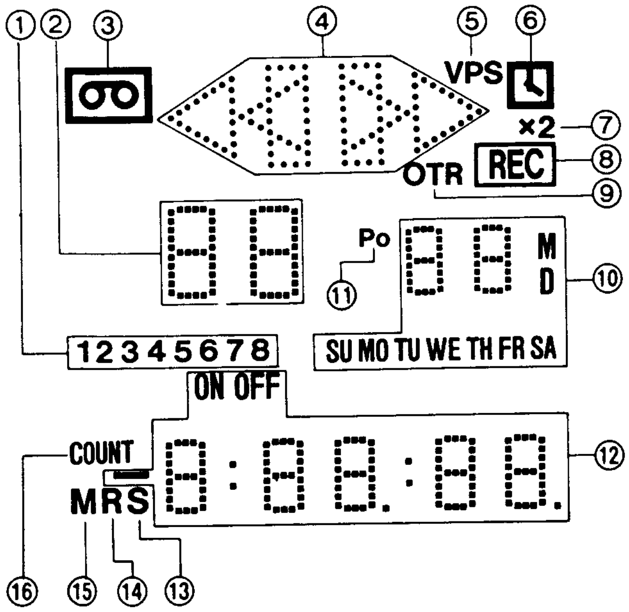
㉓ Timer Record Button

㉔ Infra-red Remote Control Receiver

㉕ Multi-Function Display

㉖ Reset Button

Multi-Function Display


①
②
③
④
⑤
⑥
VPS
×2
⑦
REC
⑧
OTR
⑨
Po
⑪
M
D
⑩
12345678
SU MO TU WE TH FR SA
ON OFF
COUNT
⑫
MRS
⑯
⑮
⑭
⑬

① Timer Programme Number

② Channel Display

③ Cassette-in Indicator

④ Tape Running Display

⑤ VPS Indicator

⑥ Timer Recording Indicator

⑦ Double Speed Indicator

⑧ Recording Indicator

⑨ OTR Indicator

⑩ Date Display

⑪ Position Indicator

⑫ Tape Counter Indicator

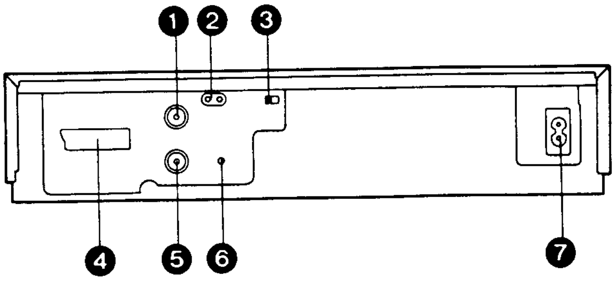
⑬ Search Indicator

⑭ Repeat Indicator

⑮ Memory Indicator

⑯ Counter Mode Indicator

REAR

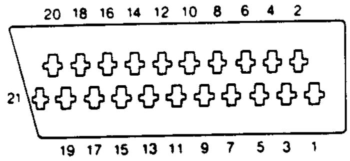


❶ RF Output Socket

❷ Vertical Lock Controls

❸ Test Signal Switch

❹ Euro AV Socket


20 18 16 14 12 10 8 6 4 2
21
19 17 15 13 11 9 7 5 3 1

1	AUDIO OUTPUT	11	No connection
2	AUDIO INPUT	12	No connection
3	AUDIO OUTPUT	13	No connection
4	AUDIO GND	14	No connection
5	No connection	15	No connection
6	AUDIO INPUT	16	No connection
7	No connection	17	VIDEO GND
8	SWITCHING VOLTAGE	18	No connection
9	No connection	19	VIDEO OUTPUT
10	No connection	20	VIDEO INPUT
		21	GND

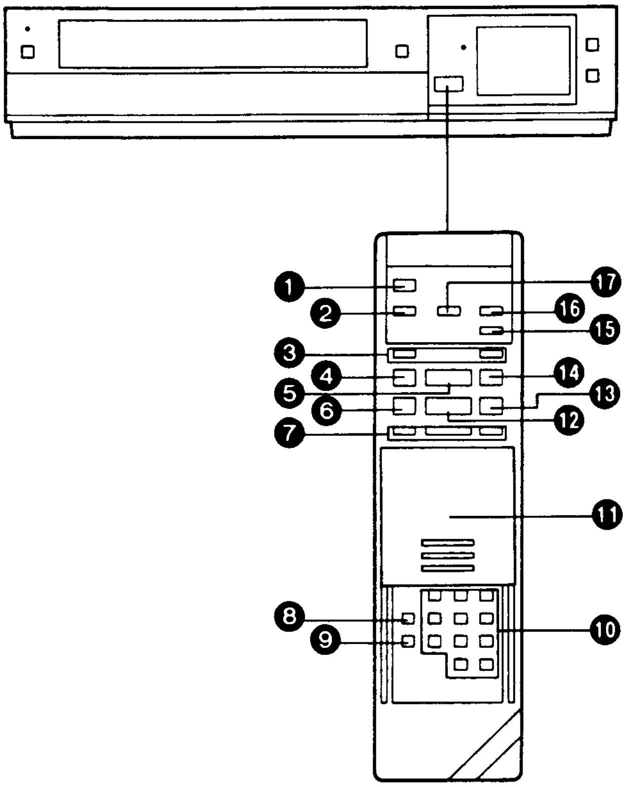
❺ RF Input Socket

❻ Video Playback Channel Selector

❼ AC Mains Lead Socket

1-2. INFRA-RED REMOTE CONTROLLER

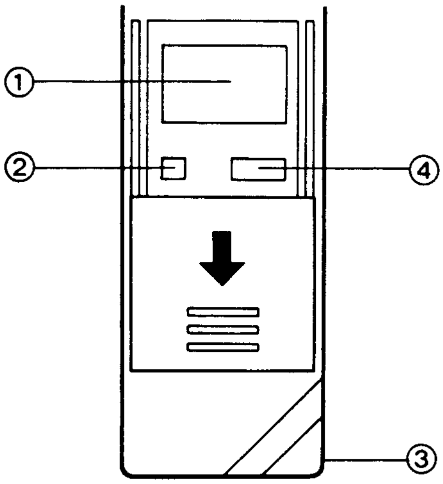
Parts Number: VEQ1110



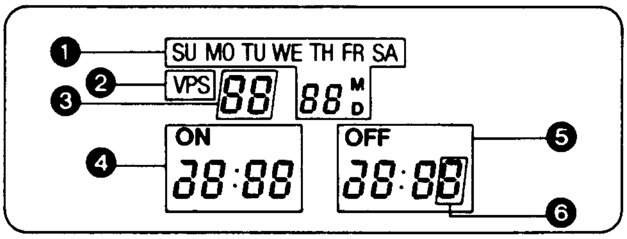
- ❶ **VTR On/Off Button**
- ❷ **Clock Counter Selector**
- ❸ **Record Buttons (●)**
- ❹ **Pause/Still Button (❚❚)**
- ❺ **Stop Button (■)**
- ❻ **Rewind ◀◀/Review ⊟ Button**
- ❼ **Slow Buttons**
- ❽ **Time Search Button**
- ❾ **Monitor Button**
- ❿ **Programme Position (Channel) Selector Buttons**
- ⓫ **Mode Selector Cover**
- ⓬ **Play/×2 Button (▶)**
- ⓭ **Fast Forward ▶▶/Cue ⊟ Button**
- ⓮ **Still Advance Button (❚▶)**
- ⓯ **Reverse Play Button**
- ⓰ **Memory/Repeat/Search Button**
- ⓱ **Reset Button**

Use as Digital Scanner

Slide the Mode Selector Cover downward.



① **Bar Code Reader Display**



- ❶ Date Display
- ❷ VPS Indicator (NV-J30EG)
- ❸ Channel Display
- ❹ Start Time Display
- ❺ End Time Display
- ❻ Check Indicator

② **Digital Scanner On/Off Button**

③ **Bar Code Reading Section**

④ **Transmit Button**

Note:
To be able to use the unit as Remote Controller, press the Digital Scanner On/Off Button (the indications in the LCD Display will disappear).

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

This flowchart indicates disassembly steps of the cabinet parts and circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

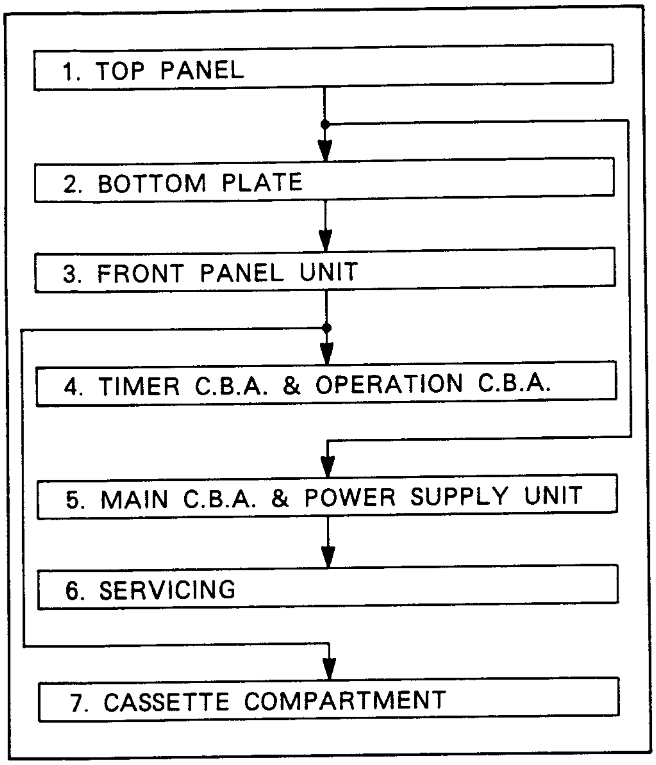

1. TOP PANEL
2. BOTTOM PLATE
3. FRONT PANEL UNIT
4. TIMER C.B.A. & OPERATION C.B.A.
5. MAIN C.B.A. & POWER SUPPLY UNIT
6. SERVICING
7. CASSETTE COMPARTMENT

Fig. D1

2-1-2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL UNIT

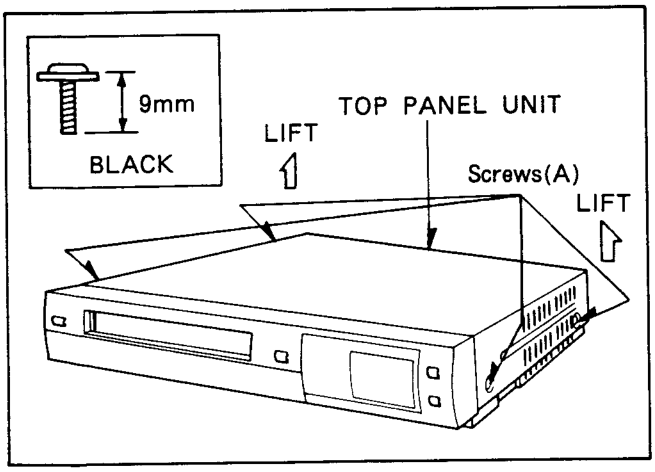

9mm
BLACK
LIFT
TOP PANEL UNIT
Screws(A)
LIFT

Fig. D2

Remove ... 4 Screws (A)

2. REMOVAL OF THE BOTTOM PLATE

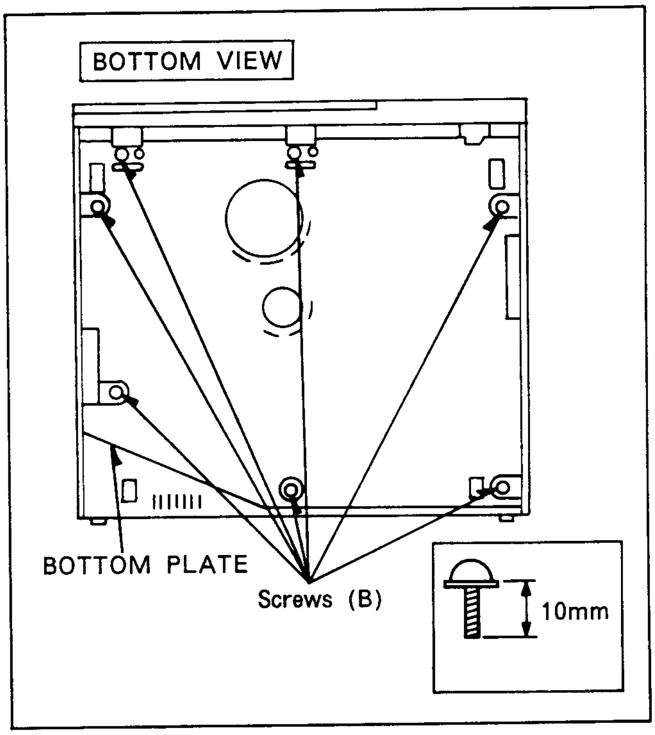

BOTTOM VIEW
BOTTOM PLATE
Screws (B)
10mm

Fig. D3

Remove ... 7 Screws (B)

3. REMOVAL OF THE FRONT PANEL UNIT

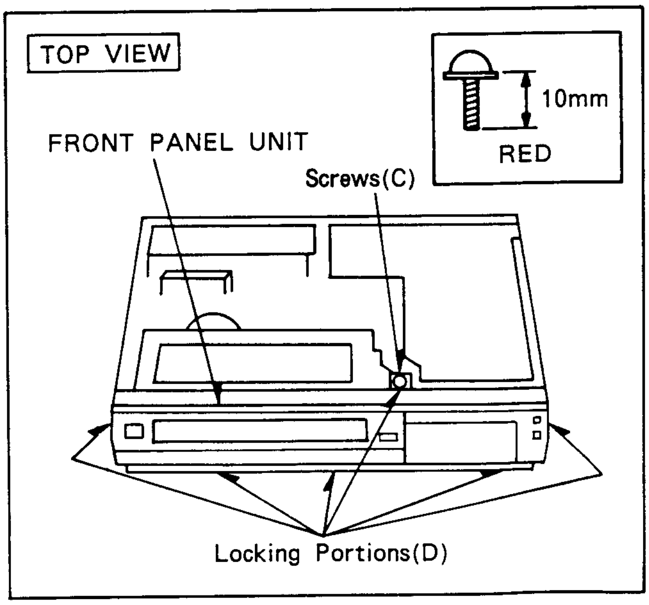

TOP VIEW
10mm
RED
FRONT PANEL UNIT
Screws(C)
Locking Portions(D)

Fig. D4

Remove ... Screw(C)
Unlock ... 6 Locking Portions(D)

4. REMOVAL OF THE TIMER C.B.A. AND OPERATION C.B.A. .

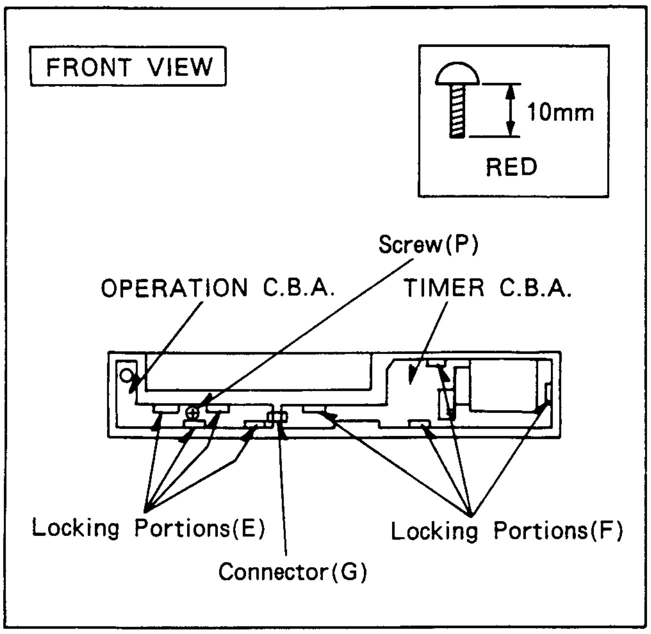

FRONT VIEW
10mm
RED
Screw(P)
OPERATION C.B.A.
TIMER C.B.A.
Locking Portions(E)
Locking Portions(F)
Connector(G)

Fig. D5

REMOVAL OF THE OPERATION C.B.A.

Remove... Screw(P) : NV-J30B
Unlock ... 4 Locking Portions(E)
Disconnect ... Connector(G)

REMOVAL OF THE TIMER C.B.A.

Unlock ... 3 Locking Portions(F)

Note: HOW TO REMOVE THE CONNECTOR (G).

When removing the connector(G), carefully lift the top portions(H) of connector to remove.

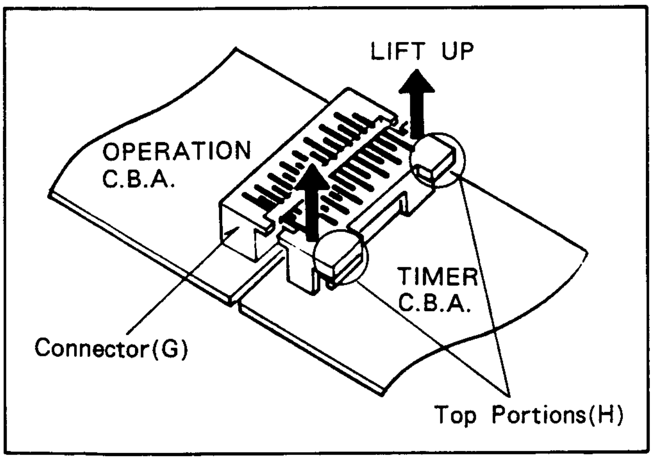

LIFT UP
OPERATION C.B.A.
TIMER C.B.A.
Connector(G)
Top Portions(H)

Fig. D6

NOTE:

If the connector is turned for checking the operatrion C.B.A. and Timer C.B.A., the short circuit could be made between reed wires.
Be sure there is no short circuit between reed wires and check the both Operation & Timer C.B.As.

5. REMOVAL OF THE MAIN C.B.A. AND POWER SUPPLY UNIT

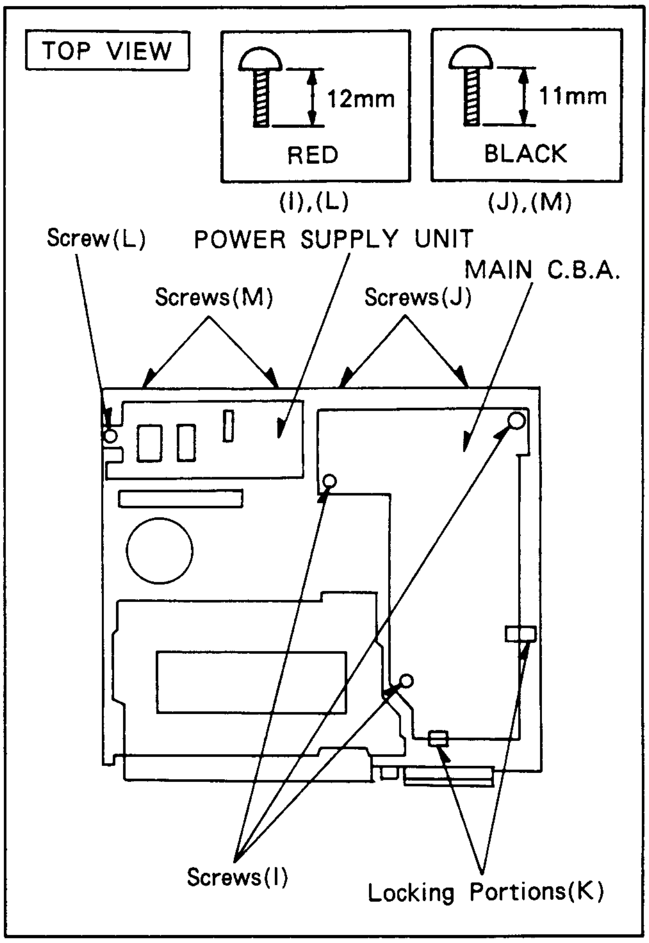

TOP VIEW
12mm
RED
(I),(L)
11mm
BLACK
(J),(M)
Screw(L)
POWER SUPPLY UNIT
MAIN C.B.A.
Screws(M)
Screws(J)
Screws(I)
Locking Portions(K)

Fig. D7

REMOVAL OF THE MAIN C.B.A.

Remove ... 3 Screws(I) and 2 Screws(J)
Unlock ... 2 Locking Portions(K)

REMOVAL OF THE POWER SUPPLY UNIT

Remove ... Screw(L) and 2 Screws(M)

6. SEVICING

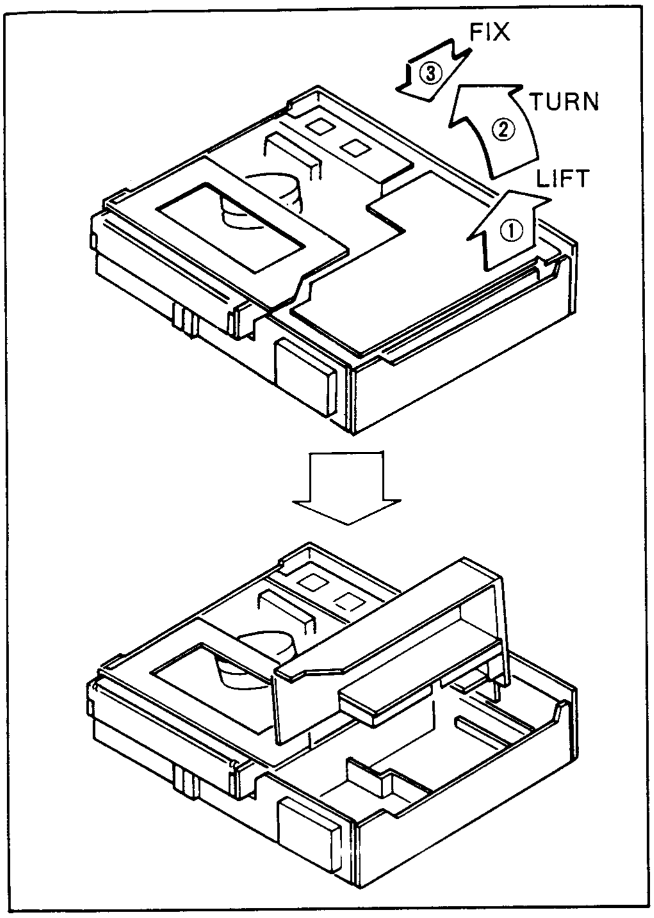

③ FIX
② TURN
① LIFT

Fig. D8

7. REMOVAL OF THE CASSETTE COMPARTMENT

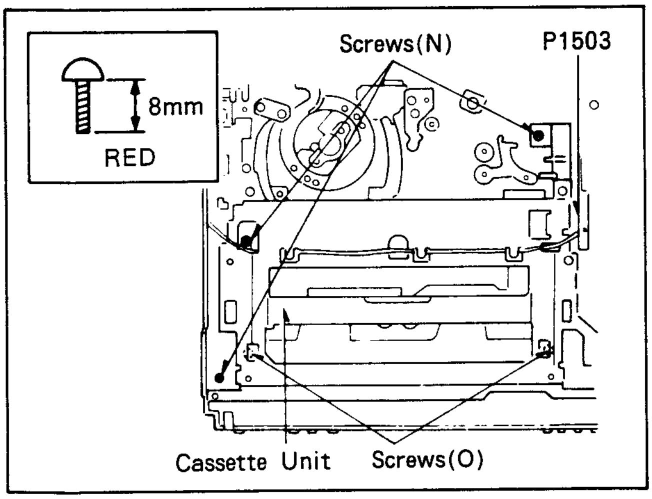

8mm
RED
Screws(N)
P1503
Cassette Unit
Screws(O)

Fig. D9

Remove the 3 screws(N).
Slide the cassette holder until appearing 2 screws(O) by turning (clockwise) the Capstan Rotor Unit (located in the bottom side as shown in Fig. D10) and remove the 2 screws(O).
Remove the wire cable from connector P1503 mounted on Take-up Photo Tr. C.B.A., then carefully pull out the Cassette Compartment.

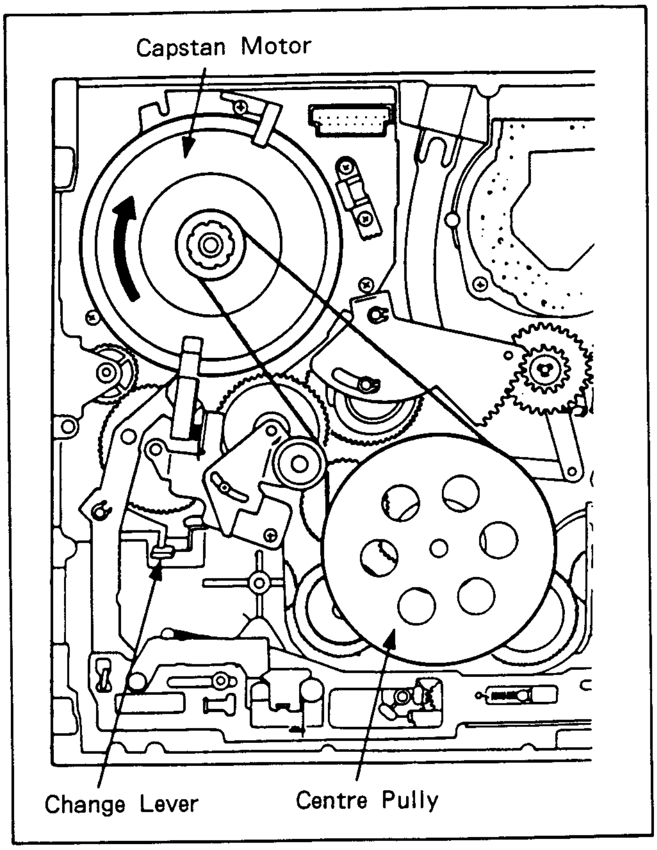

Capstan Motor
Change Lever
Centre Pully

Fig. D10

NOTE:

When restalling the Cassette Compartment, mechanical adjustment (alignment) must be performed for correct working refer to Service Manual (G Mechanical Chassis) (Order No. VRD8701105, item 3-10. mechanical adjustment (alignment).

2-1-3.How to open the Remote Control Unit

1.Removal of the sensor cap.

Turn the sensor cap counterclockwise(90 degrees) and pull the sensor cap to remove as shown in Fig D11.

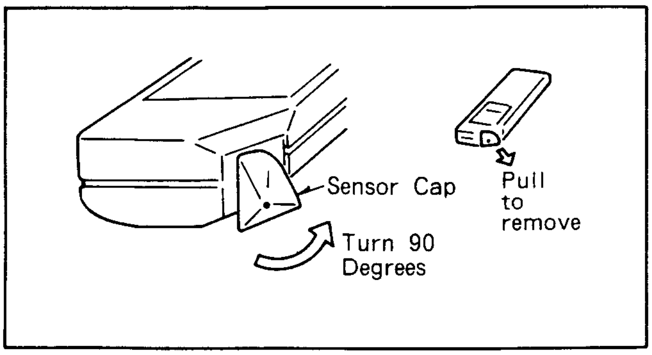

Sensor Cap
Pull to remove
Turn 90 Degrees

Fig.D11

2.Removal of the Battery Cover

Press the part of battery cover indicated by the arrow and lift off the cover.
Then take out batteries.

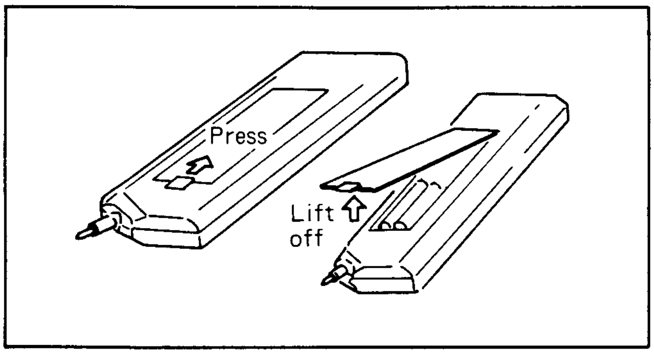

Press
Lift off

Fig.D12

3.Removal of the bottom case.

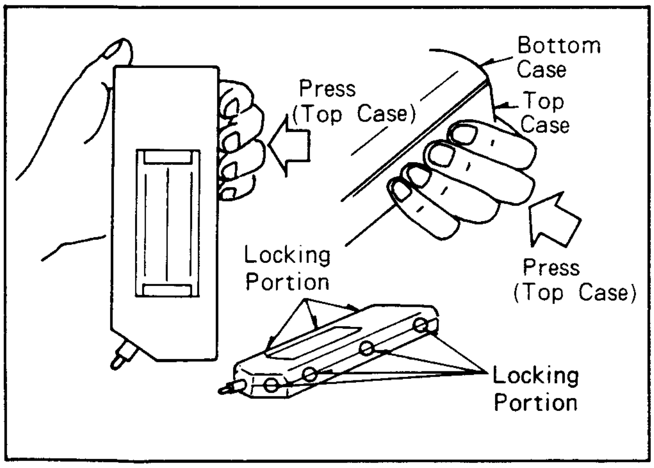

Press (Top Case)
Bottom Case
Top Case
Locking Portion
Press (Top Case)
Locking Portion

Fig.D13

Press the side of Top case with left hand as shown in Fig.D13 by big force so that the top case is bending.
Then insert your finger of right hand to gap between top case and bottom case while keep pressing by your left hand as shown in Fig.D14.

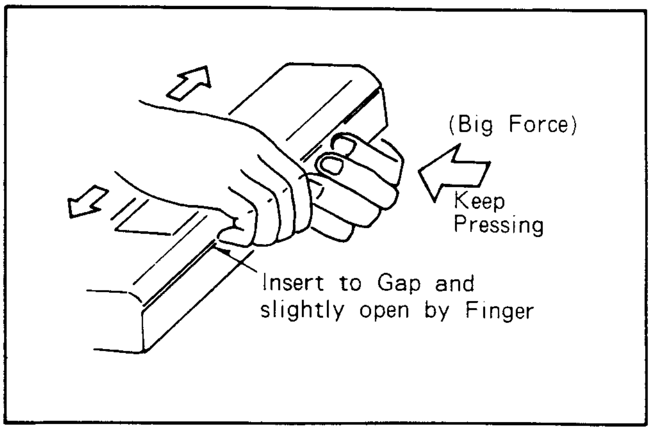

(Big Force)
Keep Pressing
Insert to Gap and slightly open by Finger

Fig.D14

First slightly open the bottom case by your inserted right hand and move your right hand to extend the open portion.
When unlock the 3 locking portion(refer to Fig.D13),the bottom case is removed easily.
If you can not open,please try opposite side with same way.

4.Removal of the sensor C.B.A.

Remove 2 screws as shown in Fig.D15.

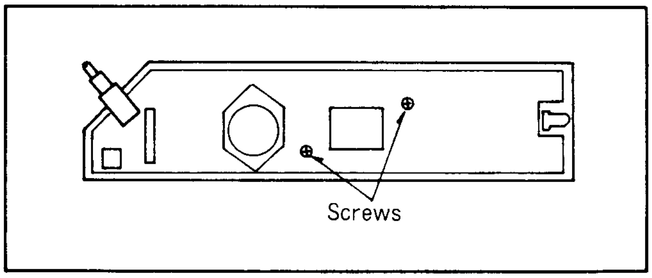


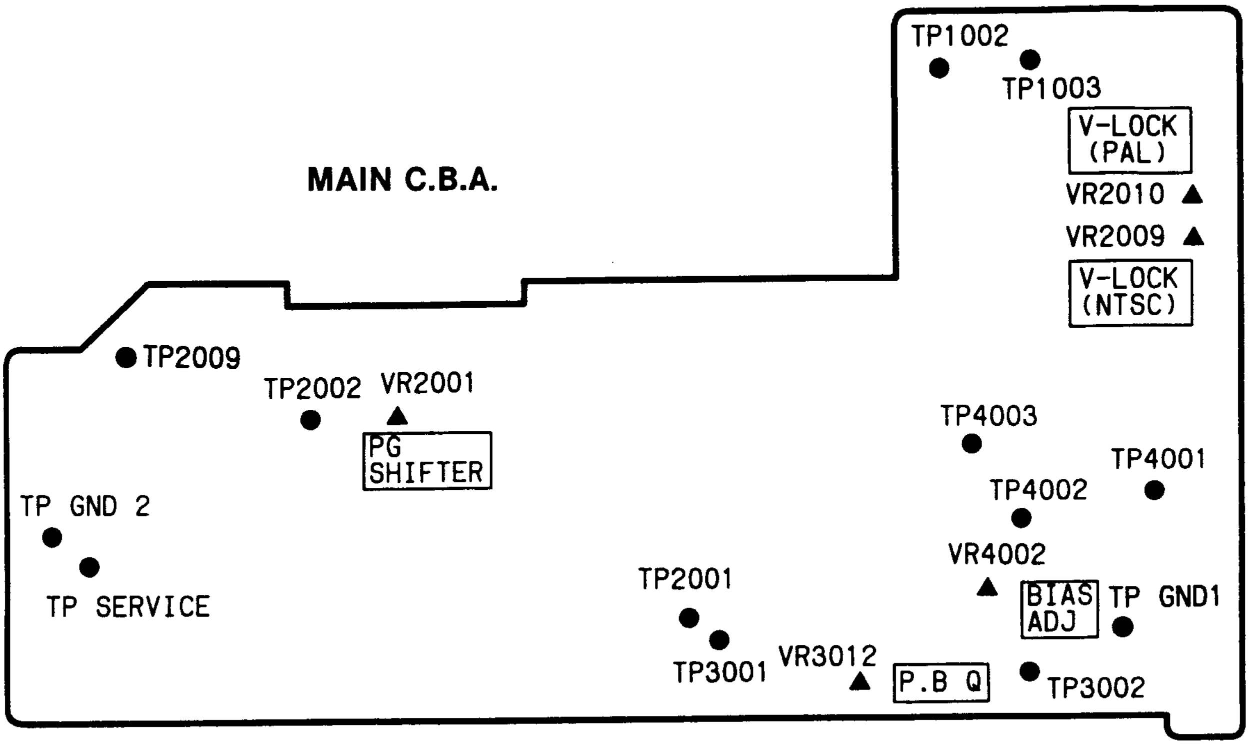
Fig.D15

2-2. MECHANICAL ADJUSTMENT PROCEDURES

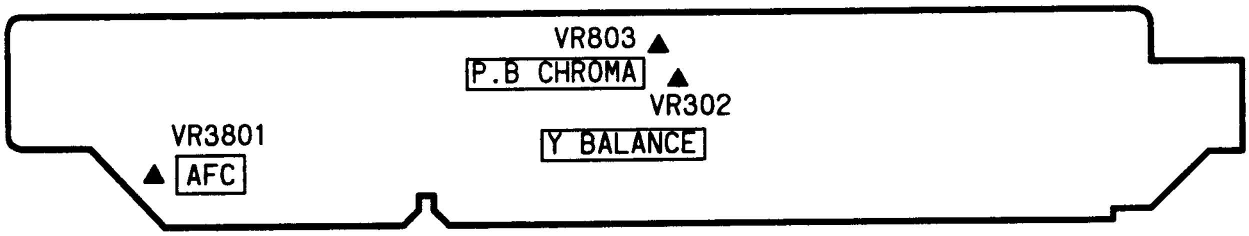
This mechanical chassis of these models NV-J33EG is the same as G-REV. Mechanical Chassis.
Therefore please refer to the Service Manual G-REV. Mechanical Chassis (Order No. VRD8901M101).

LOCATION OF TEST POINTS & CONTROLS

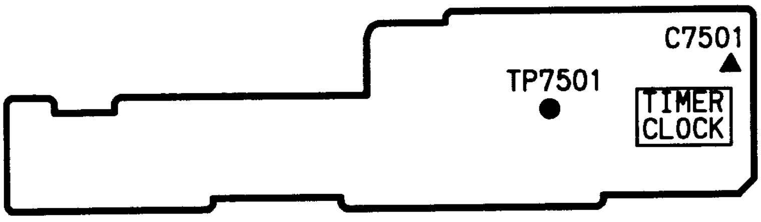
MAIN C.B.A.


TP1002
TP1003
V-LOCK (PAL)
VR2010
VR2009
V-LOCK (NTSC)
TP2009
TP2002
VR2001
PG SHIFTER
TP4003
TP4001
TP4002
TP GND 2
TP SERVICE
VR4002
TP2001
BIAS ADJ
TP GND1
TP3001
VR3012
P.B Q
TP3002

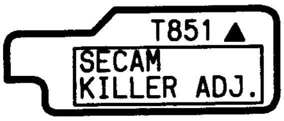
SUB MAIN C.B.A.


VR803
P.B CHROMA
VR302
VR3801
Y BALANCE
AFC

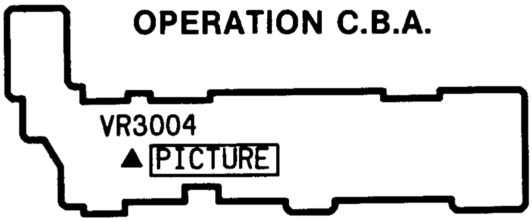
TIMER C.B.A.


C7501
TP7501
TIMER CLOCK

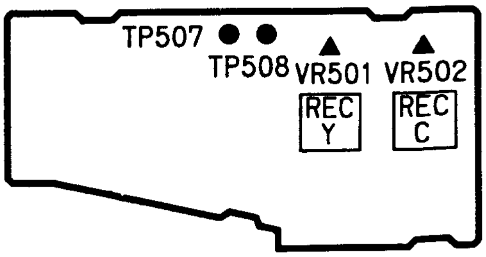
DDR SECAM PACK C.B.A.


T851
SECAM KILLER ADJ.

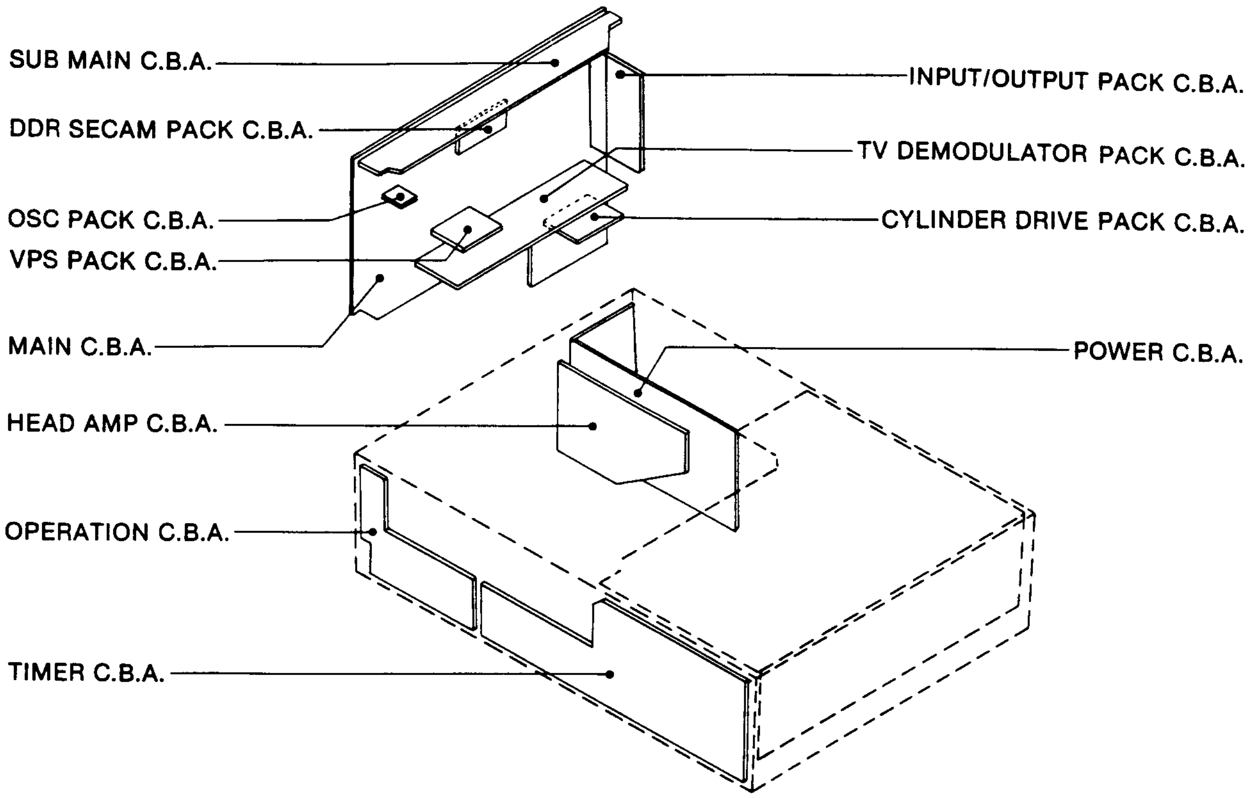
OPERATION C.B.A.


VR3004
PICTURE

HEAD AMP C.B.A.


TP507
TP508
VR501
VR502
REC Y
REC C

CIRCUIT BOARD LAYOUT


SUB MAIN C.B.A.
DDR SECAM PACK C.B.A.
OSC PACK C.B.A.
VPS PACK C.B.A.
MAIN C.B.A.
HEAD AMP C.B.A.
OPERATION C.B.A.
TIMER C.B.A.
INPUT/OUTPUT PACK C.B.A.
TV DEMODULATOR PACK C.B.A.
CYLINDER DRIVE PACK C.B.A.
POWER C.B.A.

2-3. ELECTRICAL ADJUSTMENT PROCEDURES

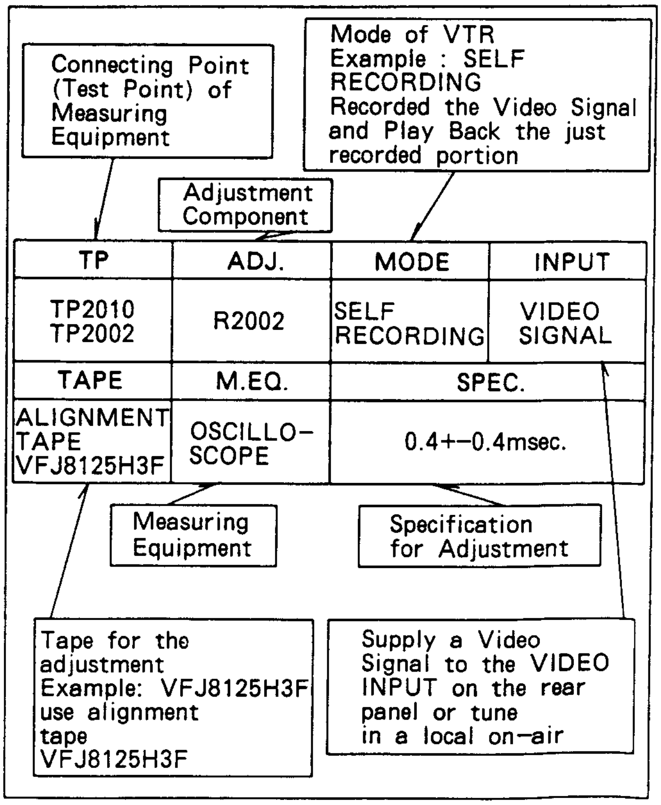
This section provides complete electrical adjustment procedures which may be required for electronic circuits of VHS Video Cassette Recorder NV-J33EG.

2-3-1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) or DVM (Digital Volt Meter)
   Voltage Range: 0.001~50V
2. Dual-Trace Oscilloscope
   Voltage Range: 0.005~50V/div.
   Frequency Range: DC~30MHz
   Probes: 10:1 or 1:1
3. Universal Counter
4. Signal Generator (Sinewave)
   Frequency Range: 0~500KHz
5. Video Sweep Generator
   Frequency Range: 0~10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS Alignment Tape (VFJ8125H3F)

2-3-2. HOW TO READ THE ADJUSTMENT PROCEDURES



Connecting Point (Test Point) of Measuring Equipment

Mode of VTR
Example : SELF RECORDING
Recorded the Video Signal and Play Back the just recorded portion

Adjustment Component

TP	ADJ.	MODE	INPUT
TP2010 TP2002	R2002	SELF RECORDING	VIDEO SIGNAL
TAPE	**M.EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	0.4+−0.4msec.	

Measuring Equipment

Specification for Adjustment

Tape for the adjustment
Example: VFJ8125H3F use alignment tape VFJ8125H3F

Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air

Fig. E1

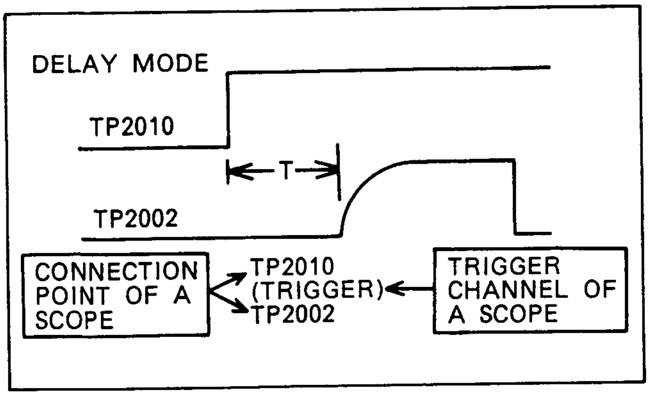

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010 (TRIGGER)
TP2002
TRIGGER CHANNEL OF A SCOPE

Fig. E2

NOTE:

Before the electrical adjustment, set the VHS VTR as following conditions except for especial instructions in each adjustment item.

1) Picture Sharpness Control...Centre Fix Position
2) Test Signal Switch...OFF Position
3) Noise Filter/Edit Switch...OFF Position
4) Digital Tracking On/Off Switch...ON Position
5) Chnnel...AV (CH 0) position

SERVO SECTION

2-3-3. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 I/O PACK-13 (VIDEO OUT)	VR2001	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	6.5+-0.5H	

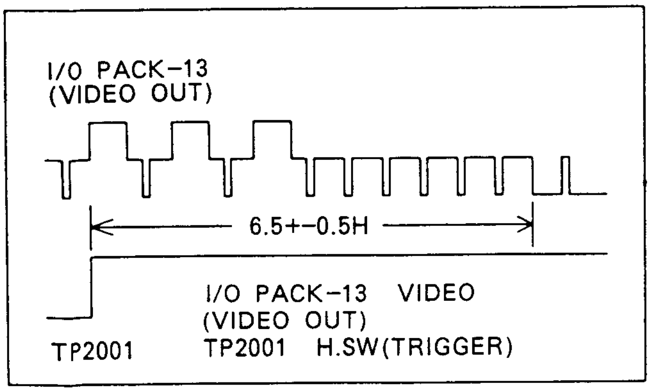

I/O PACK-13 (VIDEO OUT)
6.5+-0.5H
TP2001
I/O PACK-13 VIDEO (VIDEO OUT)
TP2001 H.SW(TRIGGER)

Fig. E3

2-3-4. ARTIFICIAL V-SYNC FOR PAL ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR2010	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	TV MONITOR		

1. Playback the just recorded portion and place the deck in STILL mode.
2. Adjust the VR2010 so that the V–dancing does not appear on the TV monitor screen.

2-3-5. ARTIFICAL V-SYNC FOR ARTIFICAL NTSC ADJUSTMENT

TP	ADJ.	MODE	INPUT
	VR2009	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	TV MONITOR		

1. Playback the just recorded portion and place the deck in STILL mode.
2. Adjust the VR2009 so that the V–dancing does not appear on the TV monitor screen.

LUMINANCE, CHROMINANCE & HEAD AMP SECTION

2-3-6. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501	RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	130+-5mVp-p	

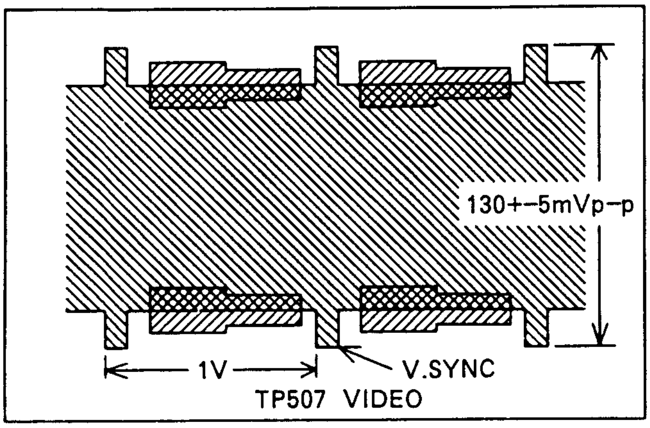

130+-5mVp-p
1V
V.SYNC
TP507 VIDEO

Fig. E4

2-3-7. CHROMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR502	RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	32+-2mVp-p	

1. Connect the oscilloscope to TP507(HOT) and TP508(GND).
2. Connect a jumper wire between P3001-1 and TP3001.
   And then place the unit to Recoding mode.
3. Adjust VR502, so that chroma level becomes 32+-2mVp-p.

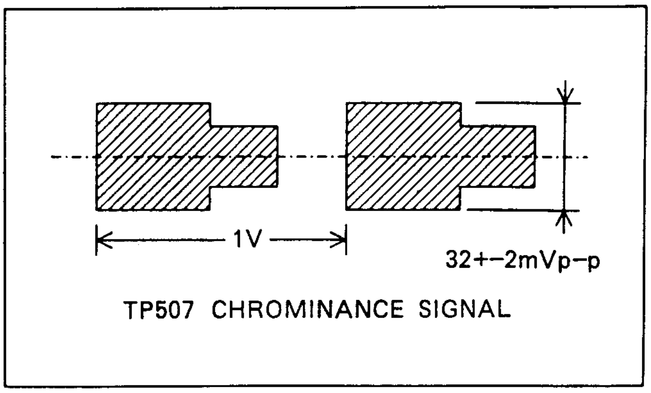

1V
32+-2mVp-p
TP507 CHROMINANCE SIGNAL

Fig. E5

2-3-8. HEAD AMP FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
I/O PACK-13 (VIDEO OUT)	VR3012	SELF RECORDING	VIDEO SWEEP
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE		

1. Set the sweep generator output as shown in below.

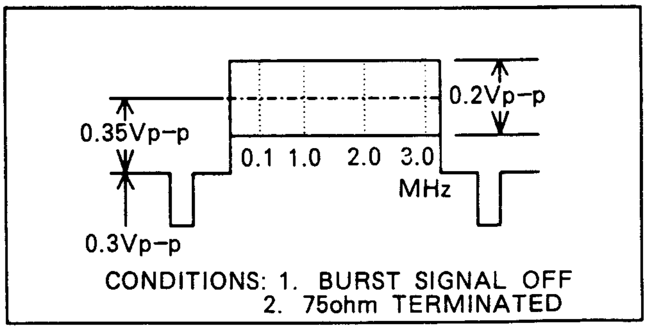

0.35Vp-p
0.2Vp-p
0.1 1.0 2.0 3.0
MHz
0.3Vp-p
CONDITIONS: 1. BURST SIGNAL OFF
2. 75ohm TERMINATED

Fig. E6

2. Picture Sharpness Control is centre fix position.
3. Adjust the VR3012 so that the waveform becomes as shown in below.

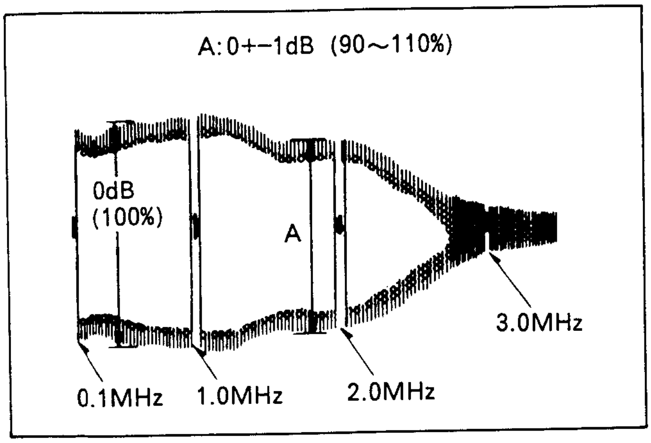

A:0+−1dB (90~110%)
0dB
(100%)
A
3.0MHz
0.1MHz
1.0MHz
2.0MHz

Fig. E7

2-3-9. Y-NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
C306−(+)	VR302	SELF RECORDING	VIDEO SIGNAL (COLOUR BAR)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	WAVEFORM IS MINIMIZED	

1. Connect the oscilloscope to (+)side of C306 on Sub Main C.B.A..
2. Adjust VR302 so that the waveform is minimized as shown below.

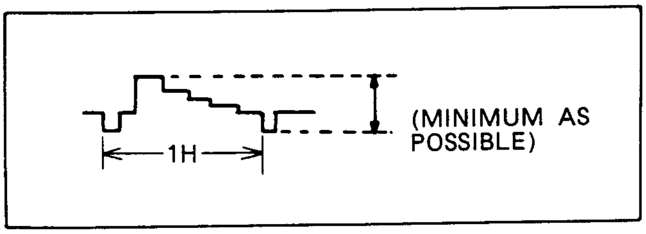

(MINIMUM AS POSSIBLE)
1H

Fig. E8

2-3-10. PLAYBACK CHROMA CYAN LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
I/O PACK−13 (VIDEO OUT)	VR803	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	0.55+−0.05Vp−p	

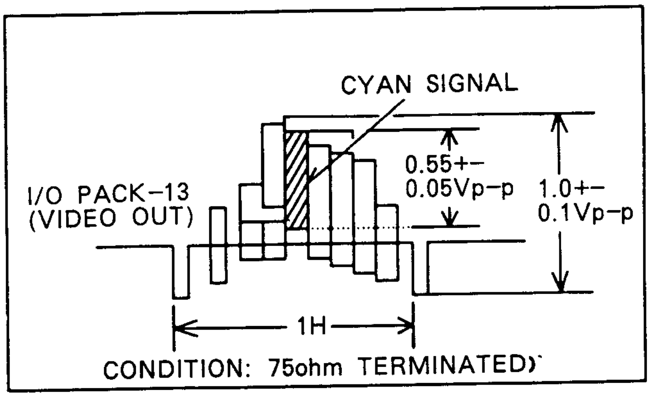

CYAN SIGNAL
I/O PACK−13
(VIDEO OUT)
0.55+−
0.05Vp−p
1.0+−
0.1Vp−p
1H
CONDITION: 75ohm TERMINATED)

Fig. E9

2-3-11. SECAM KILLER ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC851−11	T851	RECORDING	SECAM VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	Portion A is peak to negative direction.	

1. Adjust T851 so that the portion "A" becomes maximum waveform.

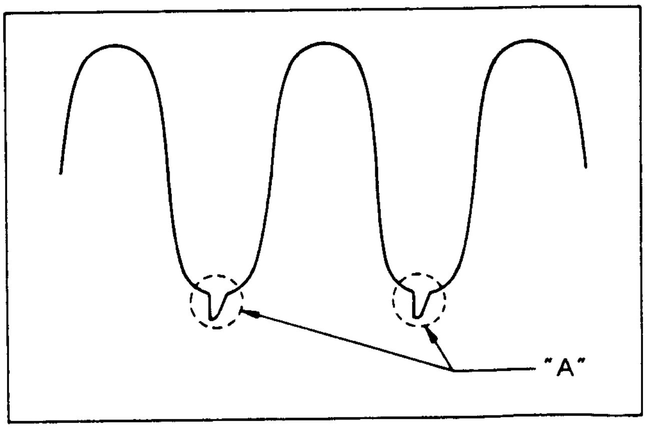


Fig. E10

2-3-12. AFC FREE RUN FOR ARTIFICIAL NTSC ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC3801−9	VR3801	STOP	SIGNAL GENERATOR (8KHz,−10dB)
TAPE	**M. EQ.**	**SPEC.**	
	SIGNAL GENERATOR/ FREQUENCY COUNTER	15735+−100Hz	

1. Connect a jumper wire between pin15 of IC3801 and TP1003.
2. Connect the frequency counter to pin9 of IC3801.
3. Adjust VR3801 so that the reading of the frequency counter is 15735+−100Hz.

AUDIO SECTION

2-3-13. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002(+) TP4003(−)	VR4002	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	2.4+−0.1mVrms	

TIMER SECTION

NOTE: Do not connect the AC power plug.

2-3-14. TIMER REFERENCE CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7501	C7501		
TAPE	**M. EQ.**	**SPEC.**	
	UNIVERSAL COUNTER	488.2812+−0.001us	

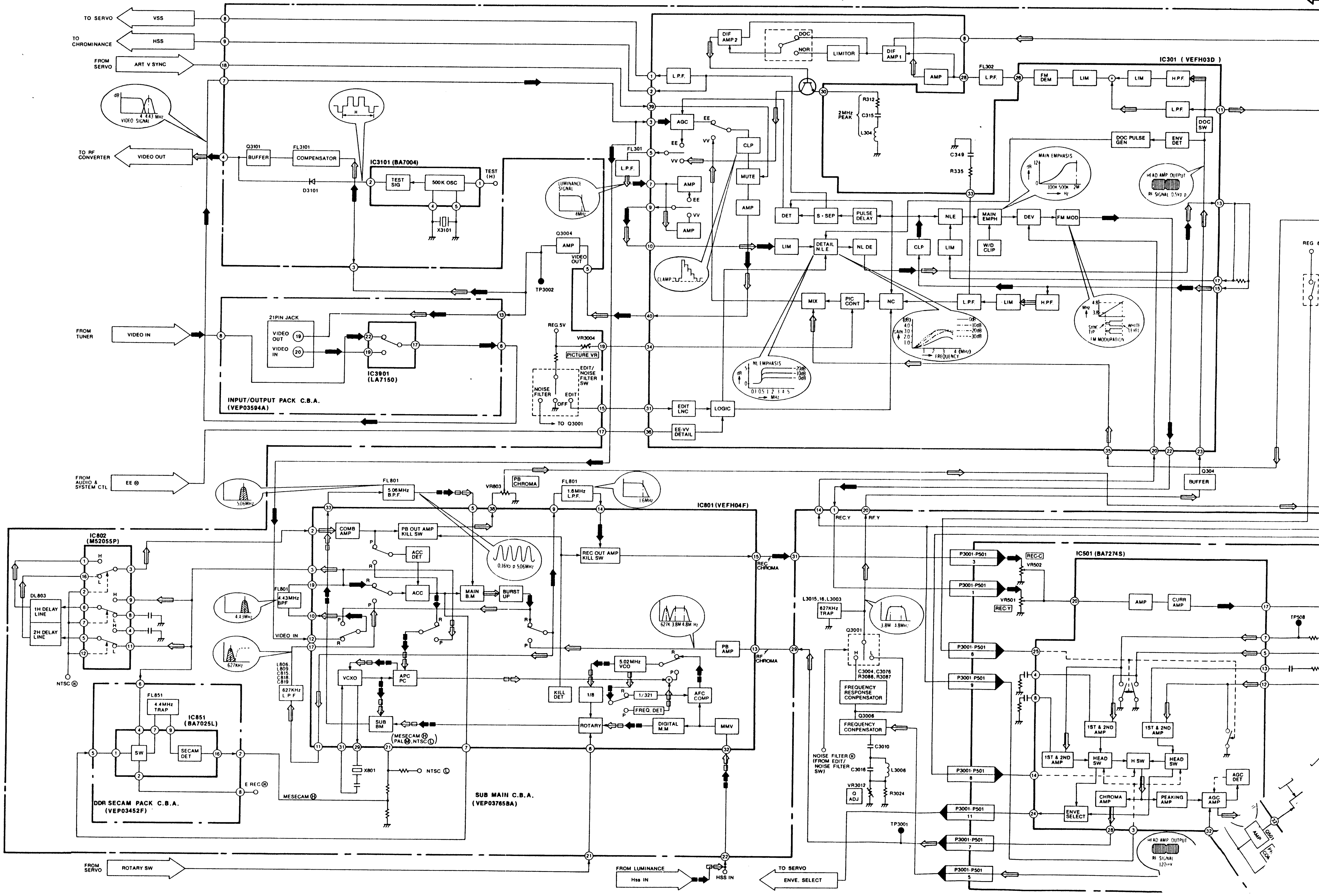
1. Connect a jumper wire between P7501−10 and 11.
2. Connect a jumper wire between P7501−8 and GND.
3. Connect a diode(MA165) between IC7501−36 and 56.

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

3-1. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

➡ MAIN SIGNAL PATH IN REC MODE

⇦ MAIN SIGNAL PATH IN PLAYBACK MODE

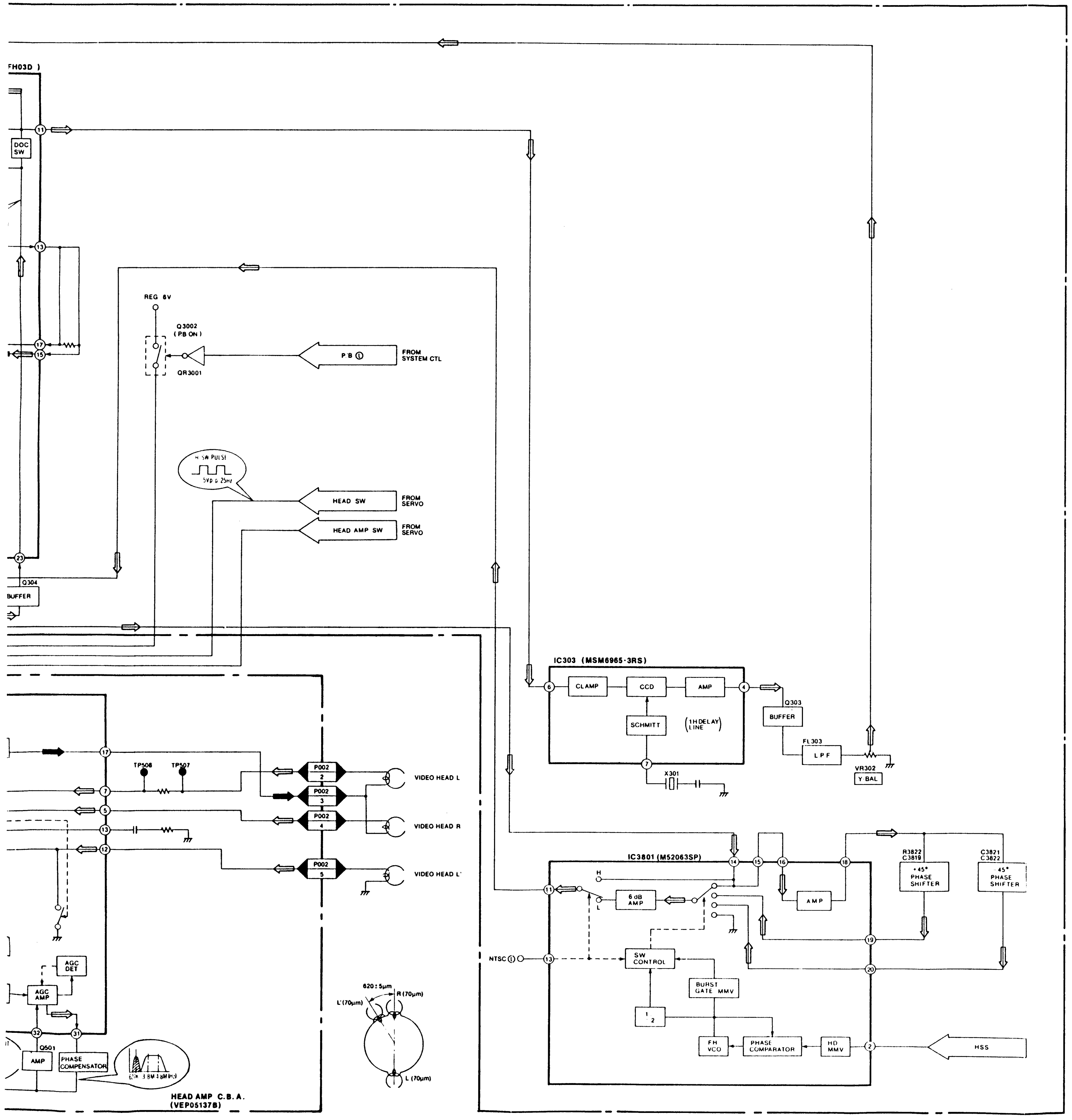


TO SERVO
VSS
TO CHROMINANCE
HSS
FROM SERVO
ART V SYNC
VIDEO SIGNAL
4 4.43 MHz
TO RF CONVERTER
VIDEO OUT
Q3101
BUFFER
FL3101
COMPENSATOR
D3101
IC3101 (BA7004)
TEST SIG
500K OSC
TEST (H)
X3101
LUMINANCE SIGNAL
4MHz
Q3004
AMP
VIDEO OUT
TP3002
FROM TUNER
VIDEO IN
21PIN JACK
VIDEO OUT
VIDEO IN
IC3901 (LA7150)
INPUT/OUTPUT PACK C.B.A. (VEP03594A)
REG 5V
VR3004
PICTURE VR
EDIT/NOISE FILTER SW
NOISE FILTER
OFF
EDIT
TO Q3001
FROM AUDIO & SYSTEM CTL
EE Ⓗ
FL301
L.P.F.
AGC
EE
VV
CLP
MUTE
AMP
CLAMP
DIF AMP 2
DOC
NOR
LIMITOR
DIF AMP 1
AMP
FL302
L.P.F.
FM DEM
LIM
H.P.F
IC301 (VEFH03D)
R312
2MHz PEAK
C315
L304
C349
R335
DOC PULSE GEN
ENV DET
DOC SW
MAIN EMPHASIS
100K 500K 2M
HEAD AMP OUTPUT
RF SIGNAL 0.5Vp-p
DET
S·SEP
PULSE DELAY
NLE
MAIN EMPH
DEV
FM MOD
LIM
DETAIL N.L.E
NL DE
CLP
W/D CLIP
MIX
PIC CONT
NC
L.P.F
LIM
H.P.F
NL EMPHASIS
0.1 0.5 1 2 3 4 5 MHz
GAIN
FREQUENCY
SYNC TIP
WHITE LEVEL
FM MODULATION
EDIT LNC
LOGIC
EE-VV DETAIL
Q304
BUFFER
REC E
FL801
5.06MHz B.P.F.
VR803
PB CHROMA
1.6MHz L.P.F.
IC801 (VEFH04F)
5.06MHz
1.6MHz
0.16Vp-p 5.06MHz
IC802 (M52055P)
DL803
1H DELAY LINE
2H DELAY LINE
NTSC Ⓗ
COMB AMP
PB OUT AMP KILL SW
ACC DET
ACC
MAIN B.M
BURST UP
REC OUT AMP KILL SW
REC CHROMA
4.43MHz BPF
4.43MHz
627KHz
VIDEO IN
L806, L809, C815, C818, C819
627KHz L.P.F
VCXO
APC PC
SUB BM
5.02MHz VCO
1/8
1/321
FREQ. DET
AFC COMP
KILL DET
ROTARY
DIGITAL M.M
MMV
PB AMP
RF CHROMA
627K 3.8M 4.8M Hz
MESECAM Ⓗ PAL Ⓜ, NTSC Ⓛ
X801
NTSC Ⓛ
MESECAM Ⓗ
FL851
4.4MHz TRAP
IC851 (BA7025L)
SW
SECAM DET
E REC Ⓗ
DDR SECAM PACK C.B.A. (VEP03452F)
SUB MAIN C.B.A. (VEP03765BA)
FROM SERVO
ROTARY SW
FROM LUMINANCE
Hss IN
HSS IN
TO SERVO
ENVE. SELECT
REC.Y
RF.Y
L3015, 16, L3003
627KHz TRAP
3.8M 4.8MHz
Q3001
C3004, C3076 R3086, R3087
FREQUENCY RESPONSE CONPENSATOR
Q3008
FREQUENCY CONPENSATOR
C3010
NOISE FILTER Ⓗ (FROM EDIT/NOISE FILTER SW)
C3016
L3006
VR3012
0 ADJ
R3024
TP3001
P3001·P501
REC-C
VR502
REC-Y
VR501
IC501 (BA7274S)
AMP
CURR AMP
TP508
1ST & 2ND AMP
HEAD SW
H SW
CHROMA AMP
ENVE SELECT
PEAKING AMP
AGC AMP
AGC DET
HEAD AMP OUTPUT
RF SIGNAL 120mV

DE

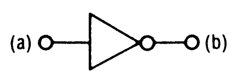
⬅■ 5.06MHz PHASE ROTATIONAL SIGNAL IN REC MODE

⇦□ 5.06MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE


FH03D)
DOC SW
11
13
17
15
23
Q304
BUFFER
REG 8V
Q3002
(P.B ON)
QR3001
P.B Ⓛ
FROM SYSTEM CTL
H SW PULSE
5Vp-p 25Hz
HEAD SW
FROM SERVO
HEAD AMP SW
FROM SERVO
IC303 (MSM6965-3RS)
6
CLAMP
CCD
AMP
4
SCHMITT
(1H DELAY LINE)
7
X301
Q303
BUFFER
FL303
LPF
VR302
Y-BAL
17
7
5
13
12
TP508
TP507
P002 2
P002 3
P002 4
P002 5
VIDEO HEAD L
VIDEO HEAD R
VIDEO HEAD L'
AGC DET
AGC AMP
32
31
Q501
AMP
PHASE COMPENSATOR
627k 3.8M 4.8M(Hz)
HEAD AMP C.B.A.
(VEP05137B)
620±5μm
R (70μm)
L' (70μm)
L (70μm)
IC3801 (M52063SP)
14
15
16
18
H
L
11
6 dB AMP
AMP
NTSC Ⓛ
13
SW CONTROL
BURST GATE MMV
1/2
FH VCO
PHASE COMPARATOR
HD MMV
2
19
20
R3822
C3819
+45° PHASE SHIFTER
C3821
C3822
-45° PHASE SHIFTER
HSS

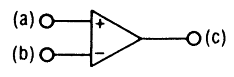
SYMBOL | **TRUTH VALUE TABLE**

INVERTER



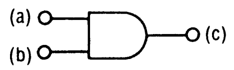
IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR



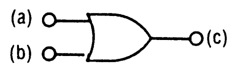
IN	(a) (b)	(a) > (b)	(a) < (b)
OUT	(c)	H	L

AND CIRCUIT



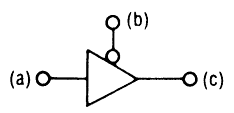
IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT



IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

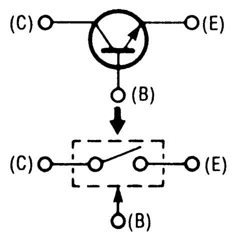
THREE STATES BUFFER



IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

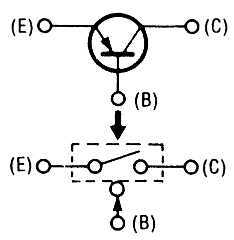
※ High Impedance

TR. SW (NPN TYPE)



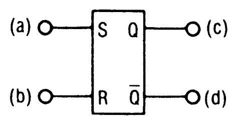
BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)



BASE	H	L
TR. SW	OFF	ON

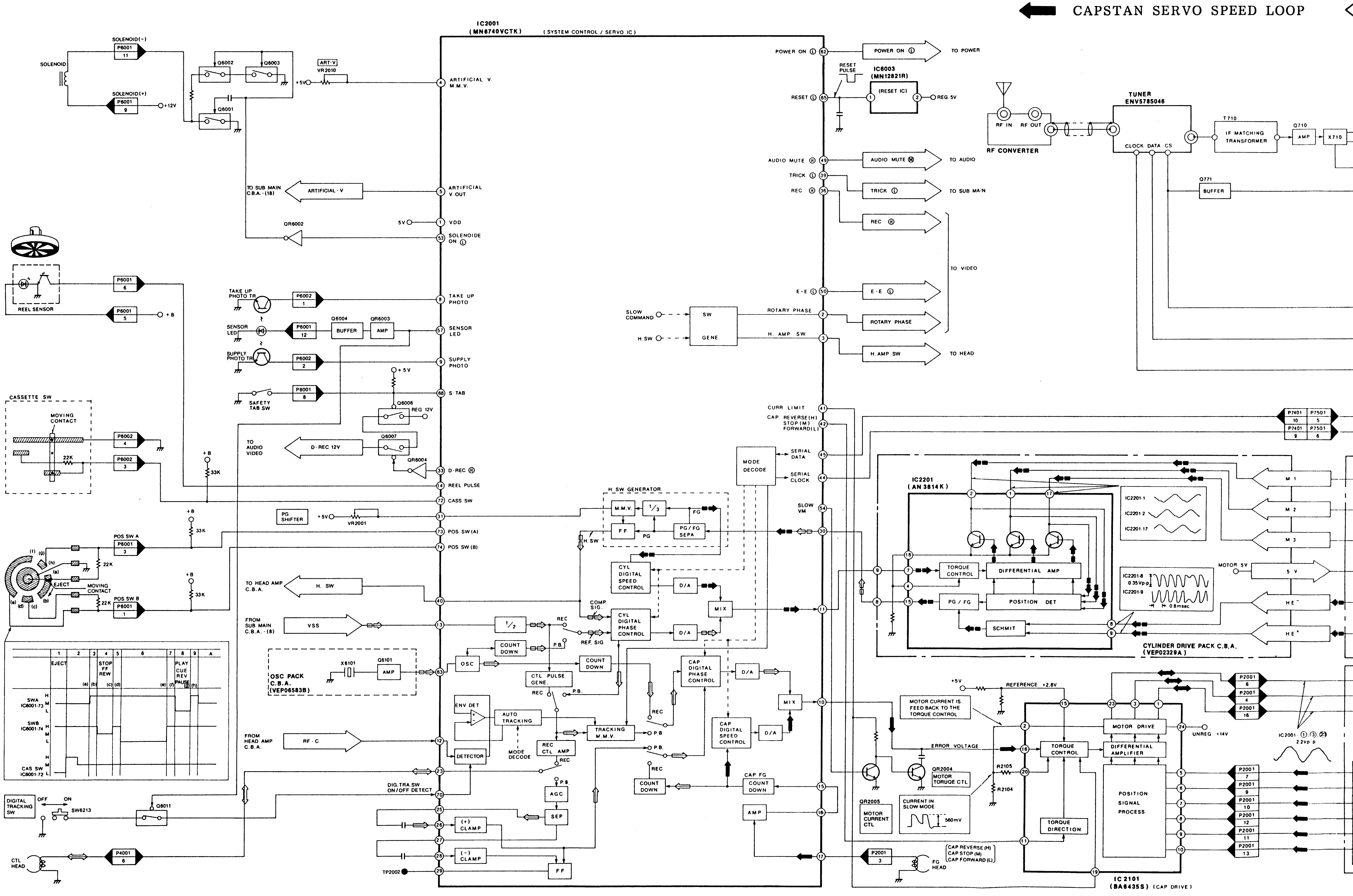
R-S TYPE FLIP-FLOP



IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

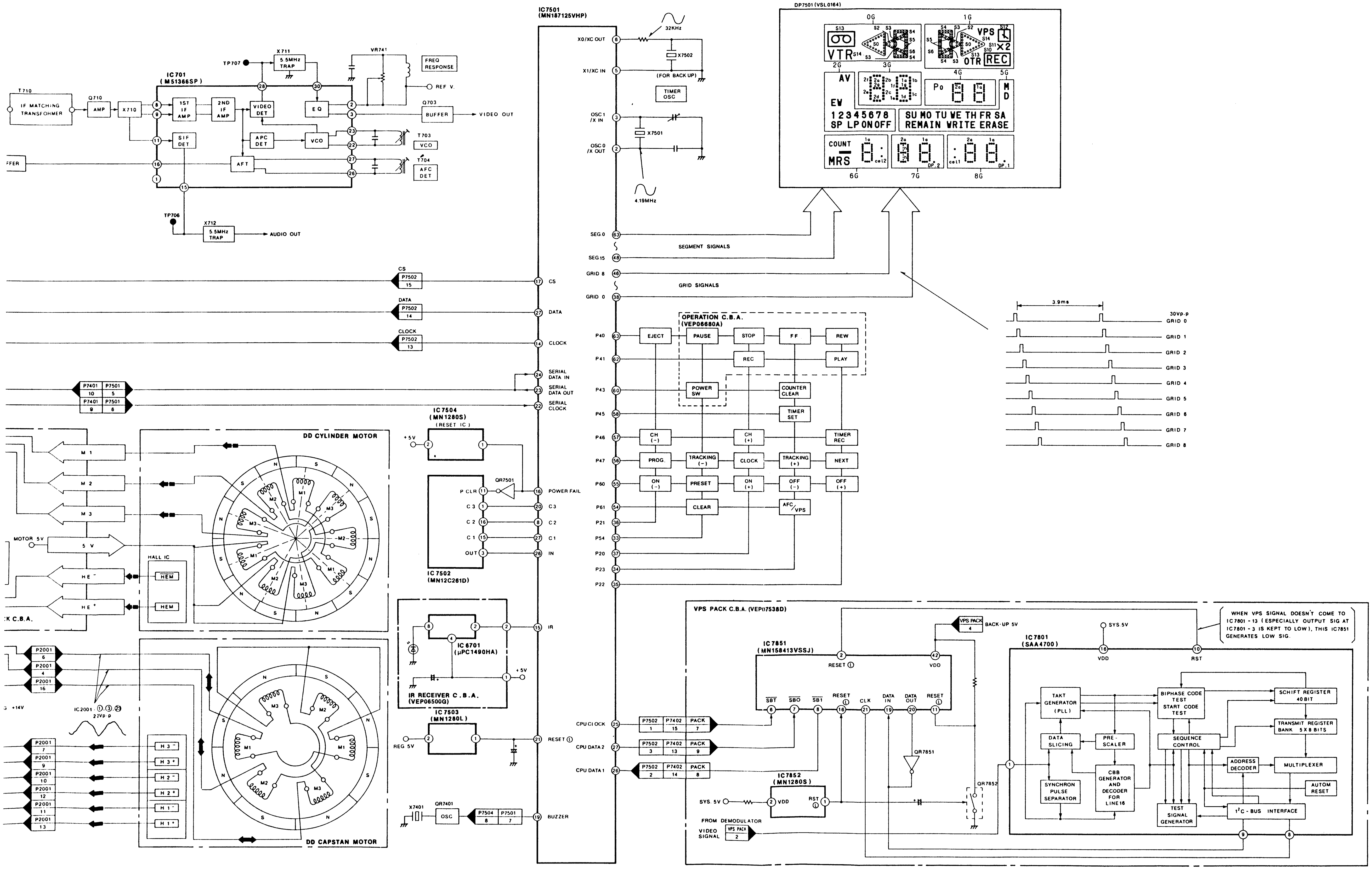
※ Initial condition is maintained.
◆ Initial condition is reverced.

3-2. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

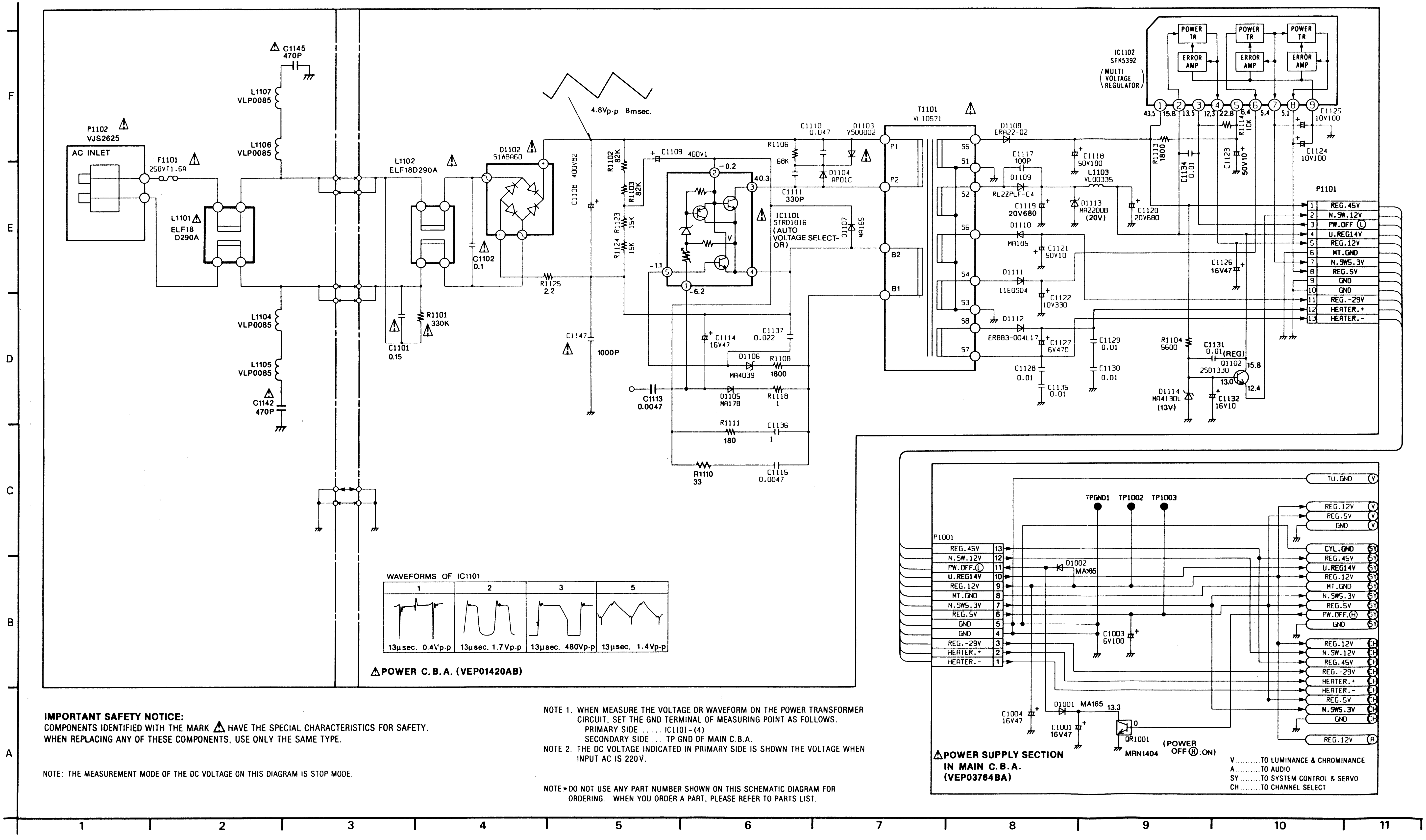

CAPSTAN SERVO SPEED LOOP
IC2001
(MN6740VCTK)
(SYSTEM CONTROL / SERVO IC)
SOLENOID
SOLENOID(−)
SOLENOID(+)
P6001
+12V
Q6002
Q6003
Q6001
ART-V
VR2010
+5V
ARTIFICIAL V. M.M.V.
TO SUB MAIN C.B.A.-(18)
ARTIFICIAL-V
ARTIFICIAL V. OUT
QR6002
5V
VDD
SOLENOIDE ON Ⓛ
REEL SENSOR
+B
TAKE UP PHOTO TR
P6002
TAKE UP PHOTO
SENSOR LED
Q6004
QR6003
BUFFER
AMP
SUPPLY PHOTO TR
SUPPLY PHOTO
+5V
SAFETY TAB SW
S TAB
Q6006
REG 12V
TO AUDIO VIDEO
D-REC 12V
Q6007
QR6004
D-REC Ⓗ
REEL PULSE
CASSETTE SW
MOVING CONTACT
22K
33K
CASS SW
PG SHIFTER
VR2001
POS SW A
POS SW B
POS SW (A)
POS SW (B)
EJECT
TO HEAD AMP C.B.A.
H. SW
FROM SUB MAIN C.B.A.-(8)
VSS
OSC PACK C.B.A. (VEP06583B)
X6101
Q6101
OSC
COUNT DOWN
FROM HEAD AMP C.B.A.
RF-C
ENV DET
AUTO TRACKING
DETECTOR
MODE DECODE
TRACKING M.M.V.
REC CTL AMP
CTL PULSE GENE.
DIG. TRA. SW ON/OFF DETECT
AGC
SEP
(+) CLAMP
(−) CLAMP
FF
TP2002
DIGITAL TRACKING SW
OFF
ON
SW6213
Q6011
CTL HEAD
P4001
SWA IC6001-73
SWB IC6001-74
CAS SW IC6001-72
STOP FF REW
PLAY CUE REV PAUSE
H SW GENERATOR
M.M.V.
1/3
FF
PG
PG/FG SEPA
FG
CYL DIGITAL SPEED CONTROL
CYL DIGITAL PHASE CONTROL
COMP. SIG.
REF. SIG
1/2
D/A
MIX
CAP DIGITAL PHASE CONTROL
CAP DIGITAL SPEED CONTROL
CAP FG COUNT DOWN
REC
P.B
POWER ON Ⓛ
TO POWER
RESET PULSE
IC6003 (MN12821R)
(RESET IC)
REG 5V
RESET Ⓛ
AUDIO MUTE Ⓗ
TO AUDIO
TRICK Ⓛ
TO SUB MAIN
REC Ⓗ
TO VIDEO
E-E Ⓛ
SLOW COMMAND
H. SW
SW
GENE
ROTARY PHASE
H. AMP SW
TO HEAD
CURR LIMIT
CAP REVERSE(H) STOP(M) FORWARD(L)
MODE DECODE
SERIAL DATA
SERIAL CLOCK
SLOW VM
RF IN
RF OUT
RF CONVERTER
TUNER ENV5785046
CLOCK DATA CS
T710
IF MATCHING TRANSFORMER
Q710
X710
Q771
BUFFER
P7401
P7501
IC2201 (AN3814K)
IC2201-1
IC2201-2
IC2201-17
TORQUE CONTROL
DIFFERENTIAL AMP
PG / FG
POSITION DET
SCHMIT
IC2201-8 0.35Vp-p
IC2201-9
0.8msec
MOTOR 5V
M 1
M 2
M 3
5 V
HE⁻
HE⁺
CYLINDER DRIVE PACK C.B.A. (VEP02329A)
REFERENCE +2.8V
MOTOR CURRENT IS FEED BACK TO THE TORQUE CONTROL
ERROR VOLTAGE
QR2004
MOTOR TORQUE CTL
QR2005
MOTOR CURRENT CTL
CURRENT IN SLOW MODE
560mV
R2105
R2104
MOTOR DRIVE
TORQUE CONTROL
DIFFERENTIAL AMPLIFIER
POSITION SIGNAL PROCESS
TORQUE DIRECTION
UNREG +14V
IC2001 ①.③.㉓
2.2Vp-p
P2001
FG HEAD
CAP REVERSE(H)
CAP STOP(M)
CAP FORWARD(L)
IC2101 (BA6435S) (CAP DRIVE)

Back Page:
LUMINANCE & CHROMINANCE Section

SPEED LOOP ⇦ CAPSTAN SERVO PHASE LOOP ◀■ CYLINDER SERVO SPEED LOOP ⇦□ CYLINDER SERVO PHASE LOOP


IC7501
(MN187125VHP)
X0/XC OUT
X1/XC IN
32KHz
X7502
(FOR BACK UP)
TIMER OSC
OSC 1 /X IN
OSC 0 /X OUT
X7501
4.19MHz
SEG 0
SEG 15
GRID 8
GRID 0
SEGMENT SIGNALS
GRID SIGNALS
CS
DATA
CLOCK
SERIAL DATA IN
SERIAL DATA OUT
SERIAL CLOCK
POWER FAIL
C3
C2
C1
IN
IR
RESET ①
BUZZER
P40
P41
P43
P45
P46
P47
P60
P61
P21
P54
P20
P23
P22
CPU CLOCK
CPU DATA 2
CPU DATA 1
DP7501 (VSL0164)
0G
1G
2G
3G
4G
5G
6G
7G
8G
VTR
VPS
OTR
REC
AV
EW
Po
M
D
1 2 3 4 5 6 7 8
SP LP ON OFF
SU MO TU WE TH FR SA
REMAIN WRITE ERASE
COUNT
MRS
3.9ms
30Vp-p
GRID 0
GRID 1
GRID 2
GRID 3
GRID 4
GRID 5
GRID 6
GRID 7
GRID 8
OPERATION C.B.A.
(VEP06680A)
EJECT
PAUSE
STOP
FF
REW
REC
PLAY
POWER SW
COUNTER CLEAR
TIMER SET
CH (-)
CH (+)
TIMER REC
PROG.
TRACKING (-)
CLOCK
TRACKING (+)
NEXT
ON (-)
PRESET
ON (+)
OFF (-)
OFF (+)
CLEAR
AFC/VPS
T710
IF MATCHING TRANSFORMER
Q710
AMP
X710
IC701
(M51366SP)
1ST IF AMP
2ND IF AMP
VIDEO DET
EQ
SIF DET
APC DET
VCO
AFT
TP707
X711
5.5MHz TRAP
VR741
FREQ RESPONSE
REF V.
Q703
BUFFER
VIDEO OUT
T703
VCO
T704
AFC DET
FFER
TP706
X712
5.5MHz TRAP
AUDIO OUT
P7502 15
P7502 14
P7502 13
P7401 10
P7501 5
P7401 9
P7501 6
DD CYLINDER MOTOR
M1
M2
M3
MOTOR 5V
5 V
HALL IC
HEM
HE-
HE+
K C.B.A.
N
S
IC7504
(MN1280S)
(RESET IC)
+5V
QR7501
P CLR
IC7502
(MN12C261D)
IC 6701
(μPC1490HA)
IR RECEIVER C.B.A.
(VEP06500G)
IC7503
(MN1280L)
REG 5V
X7401
QR7401
OSC
P7504 8
P7501 7
P2001 6
P2001 4
P2001 16
P2001 7
P2001 9
P2001 10
P2001 12
P2001 11
P2001 13
+14V
IC2001 ①, ③, ㉙
2.2Vp-p
H3-
H3+
H2-
H2+
H1-
H1+
DD CAPSTAN MOTOR
VPS PACK C.B.A. (VEP07538D)
VPS PACK 4
BACK-UP 5V
SYS 5V
IC7851
(MN158413VSSJ)
RESET ①
VDD
SBT
SBO
SBI
RESET ①
CLK
DATA IN
DATA OUT
RESET ①
P7502 1
P7402 15
PACK 7
P7502 3
P7402 13
PACK 9
P7502 2
P7402 14
PACK 8
QR7851
IC7852
(MN1280S)
SYS. 5V
RST ①
QR7852
FROM DEMODULATOR
VIDEO SIGNAL
VPS PACK 2
IC7801
(SAA4700)
VDD
RST
TAKT GENERATOR (PLL)
BIPHASE CODE TEST
START CODE TEST
SCHIFT REGISTER 40 BIT
TRANSMIT REGISTER BANK 5×8 BITS
DATA SLICING
PRE-SCALER
SEQUENCE CONTROL
ADDRESS DECODER
MULTIPLEXER
SYNCHRON PULSE SEPARATOR
CBB GENERATOR AND DECODER FOR LINE16
TEST SIGNAL GENERATOR
I²C-BUS INTERFACE
AUTOM RESET
WHEN VPS SIGNAL DOESN'T COME TO IC7801-13 (ESPECIALLY OUTPUT SIG AT IC7801-3 IS KEPT TO LOW), THIS IC7851 GENERATES LOW SIG.

3-3. POWER SCHEMATIC DIAGRAM


P1102
VJS2625
AC INLET
F1101
250VT1.6A
L1101
ELF18
D290A
C1145
470P
L1107
VLP0085
L1106
VLP0085
L1104
VLP0085
L1105
VLP0085
C1142
470P
L1102
ELF18D290A
C1102
0.1
C1101
0.15
R1101
330K
D1102
S1WBA60
R1125
2.2
C1108
400V82
C1147
1000P
4.8Vp-p 8msec.
R1102
82K
R1103
82K
R1123
15K
R1124
15K
C1109 400V1
-0.2
40.3
-1.1
-6.2
IC1101
STR01816
(AUTO
VOLTAGE SELECT-
OR)
C1110
0.047
D1103
V500002
R1106
68K
D1104
AP01C
C1111
330P
D1107
MA165
C1114
16V47
C1137
0.022
D1106
MA4039
R1108
1800
C1113
0.0047
D1105
MA178
R1118
1
R1111
180
C1136
1
R1110
33
C1115
0.0047
T1101
VLT0571
P1
P2
B2
B1
S5
S1
S2
S6
S4
S3
S8
S7
D1108
ERA22-02
C1117
100P
D1109
RL2ZPLF-C4
C1118
50V100
L1103
VLQ0335
C1119
20V680
D1113
MA2200B
(20V)
C1120
20V680
D1110
MA185
C1121
50V10
D1111
11E0504
C1122
10V330
D1112
ERB83-004L17
C1127
6V470
C1129
0.01
C1128
0.01
C1130
0.01
C1135
0.01
IC1102
STK5392
(MULTI
VOLTAGE
REGULATOR)
POWER
TR
ERROR
AMP
43.5
15.8
13.5
12.3
22.8
6.4
5.4
5.1
R1113
1800
C1134
0.01
R1114
10K
C1123
50V10
C1125
10V100
C1124
10V100
C1126
16V47
R1104
5600
C1131
0.01
(REG)
Q1102
2SD1330
15.8
13.0
12.4
D1114
MA4130L
(13V)
C1132
16V10
P1101
1 REG.45V
2 N.SW.12V
3 PW.OFF Ⓛ
4 U.REG14V
5 REG.12V
6 MT.GND
7 N.SWS.3V
8 REG.5V
9 GND
10 GND
11 REG.-29V
12 HEATER.+
13 HEATER.-
WAVEFORMS OF IC1101
1
2
3
5
13μsec. 0.4Vp-p
13μsec. 1.7Vp-p
13μsec. 480Vp-p
13μsec. 1.4Vp-p
⚠POWER C.B.A. (VEP01420AB)
TU.GND Ⓥ
TPGND1 TP1002 TP1003
REG.12V Ⓥ
REG.5V Ⓥ
GND Ⓥ
P1001
REG.45V 13
N.SW.12V 12
PW.OFF.Ⓛ 11
U.REG14V 10
REG.12V 9
MT.GND 8
N.SWS.3V 7
REG.5V 6
GND 5
GND 4
REG.-29V 3
HEATER.+ 2
HEATER.- 1
D1002
MA165
C1003
6V100
CYL.GND SY
REG.45V SY
U.REG14V SY
REG.12V SY
MT.GND SY
N.SWS.3V SY
REG.5V SY
PW.OFF.Ⓗ SY
GND SY
REG.12V CH
N.SW.12V CH
REG.45V CH
REG.-29V CH
HEATER.+ CH
HEATER.- CH
REG.5V CH
N.SWS.3V CH
GND CH
REG.12V Ⓐ
C1004
16V47
D1001 MA165
13.3
C1001
16V47
0
QR1001
MRN1404
(POWER
OFF Ⓗ:ON)
⚠POWER SUPPLY SECTION
IN MAIN C.B.A.
(VEP03764BA)
V..........TO LUMINANCE & CHROMINANCE
A..........TO AUDIO
SY........TO SYSTEM CONTROL & SERVO
CH........TO CHANNEL SELECT
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE ..... IC1101-(4)
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

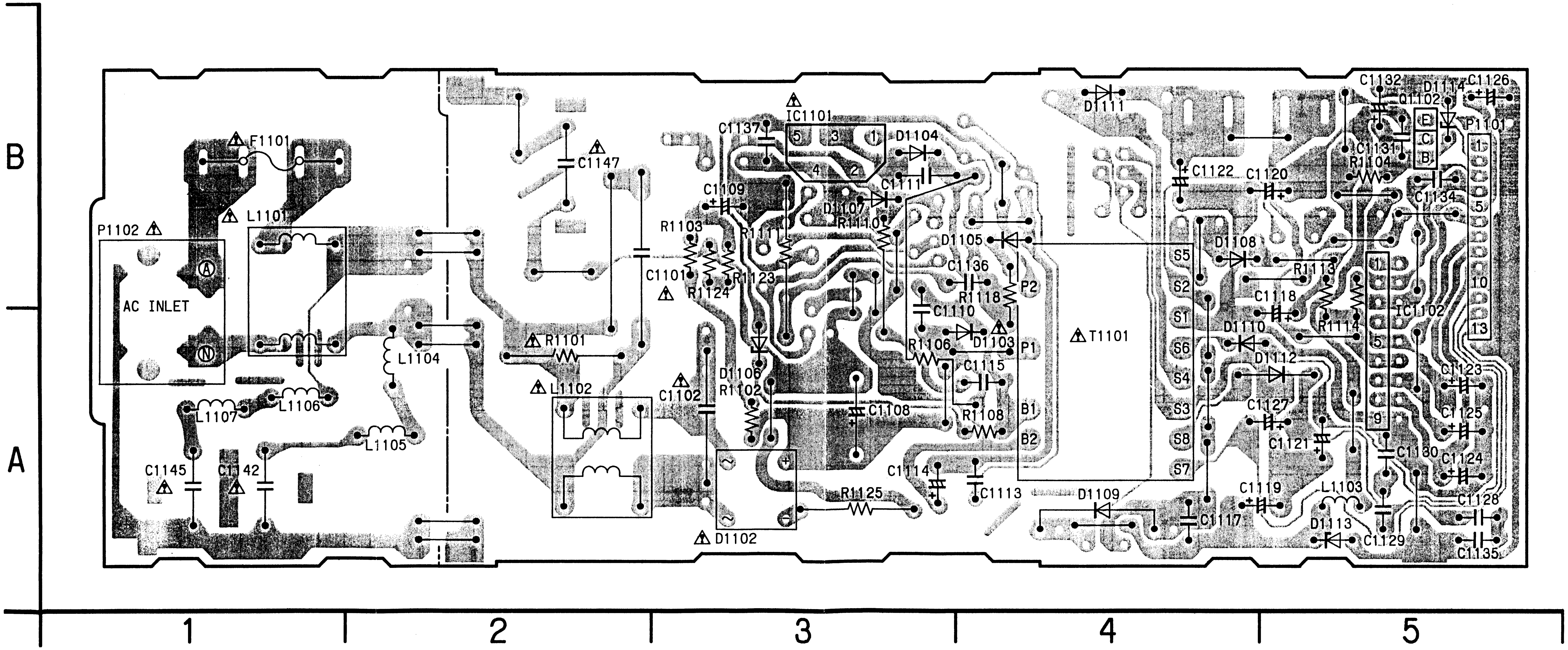
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 220V.

NOTE ▸ DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

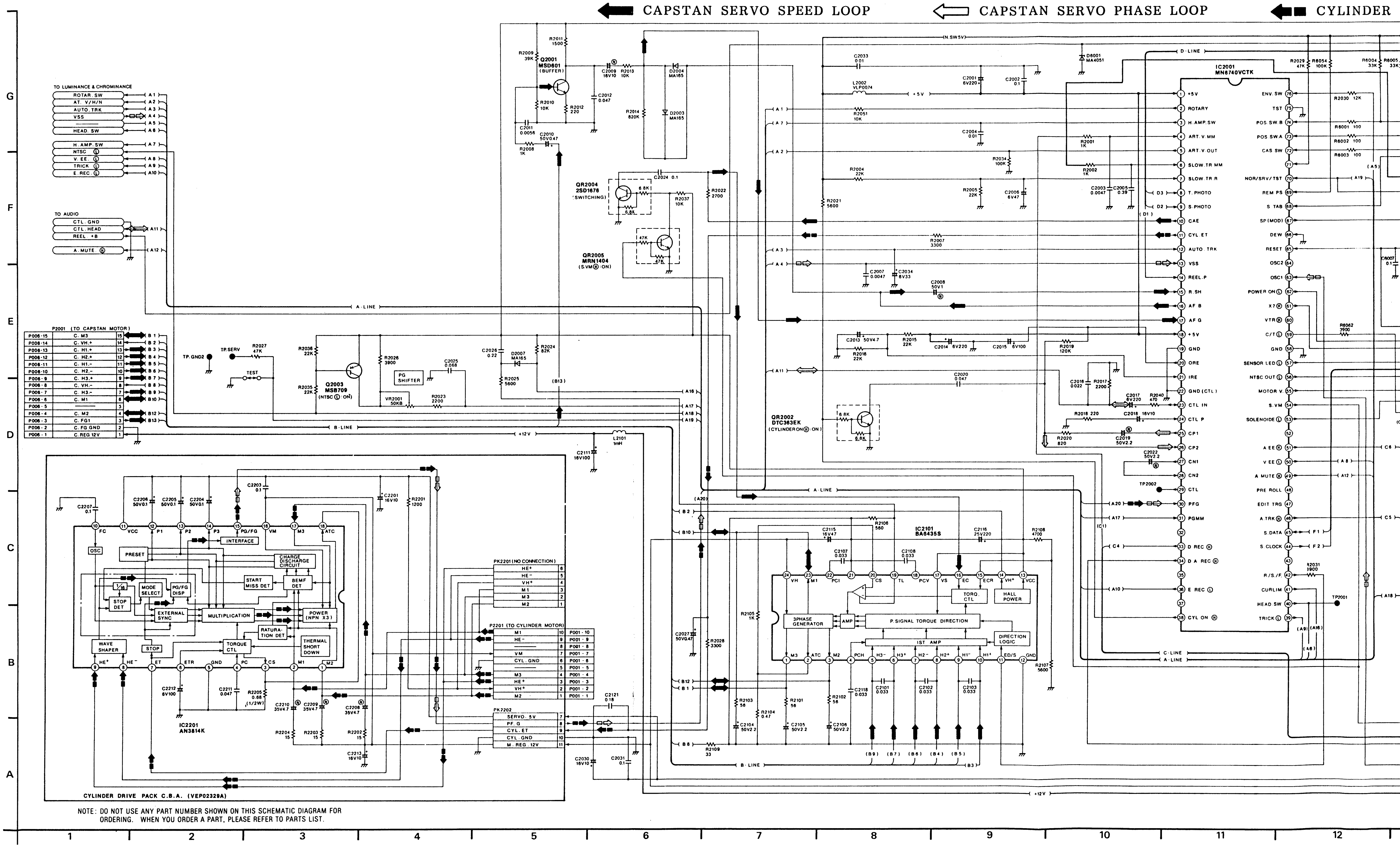
3-4. POWER C.B.A. (VEP01420AB)

POWER C.B.A.	
Transistor	
Q1102	B-5
Integrated Circuit	
IC1101 IC1102	B-3 B-5
Connector	
P1101 P1102	C-5 B-1

ADDRESS INFORMATION


B
A
1
2
3
4
5
P1102
AC INLET
A
N
F1101
L1101
L1104
L1107
L1106
L1105
C1145
C1142
C1147
R1101
L1102
C1101
R1124
R1103
R1123
C1102
C1109
C1137
IC1101
5
3
1
4
2
D1104
C1111
D1107
R1110
R1111
D1106
R1102
C1108
D1102
D1105
C1136
R1118
C1110
P2
D1103
R1106
P1
C1115
R1108
B1
B2
C1114
C1113
R1125
T1101
D1111
D1109
C1117
S5
S2
S1
S6
S4
S3
S8
S7
C1122
C1120
D1108
R1113
C1118
D1110
D1112
C1127
C1121
C1119
L1103
D1113
C1129
C1132
D1114
C1126
Q1102
E
C
B
P1101
C1131
R1104
C1134
R1114
IC1102
1
5
9
10
13
C1123
C1125
C1130
C1124
C1128
C1135

3-5. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM


CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER
TO LUMINANCE & CHROMINANCE
ROTAR. SW
AT. V/H/N
AUTO. TRK
VSS
HEAD. SW
H. AMP. SW
NTSC Ⓛ
V. EE. Ⓛ
TRICK Ⓛ
E. REC. Ⓛ
TO AUDIO
CTL. GND
CTL. HEAD
REEL +B
A. MUTE Ⓗ
P2001 (TO CAPSTAN MOTOR)
Q2001 MSD601 (BUFFER)
QR2004 2SD1676 (SWITCHING)
QR2005 MRN1404 (S.VM Ⓗ : ON)
Q2003 MSB709 (NTSC Ⓛ : ON)
QR2002 DTC363EK (CYLINDER ON Ⓗ : ON)
TP. GND2
TP. SERV
TEST
PG SHIFTER
A · LINE
B · LINE
C · LINE
N.SW 5V
D · LINE
+12V
+5V
IC2001 MN6740VCTK
+5V
ROTARY
H. AMP. SW
ART. V. MM
ART. V. OUT
SLOW. TR MM
SLOW. TR. R
T. PHOTO
S. PHOTO
CAE
CYL. ET
AUTO. TRK
VSS
REEL. P
R. SH
AF B
AF G
+5V
GND
ORE
IRE
GND (CTL)
CTL. IN
CTL. P
CP1
CP2
CN1
CN2
CTL
PFG
PGMM
D. REC Ⓗ
D. A. REC Ⓗ
E. REC Ⓛ
CYL. ON Ⓗ
ENV. SW
TST
POS. SW. B
POS. SW. A
CAS SW
NOR/SRV/TST
REM. PS
S. TAB
SP(MOD)
DEW
RESET
OSC2
OSC1
POWER ON Ⓛ
X7 Ⓗ
VTR Ⓗ
C/T Ⓛ
GND
SENSOR LED Ⓛ
NTSC OUT Ⓛ
MOTOR V.
S. VM
SOLENOIDE Ⓛ
A. EE Ⓗ
V. EE Ⓛ
A. MUTE Ⓗ
PRE ROLL
EDIT TRG
A. TRK Ⓗ
S. DATA
S. CLOCK
R./S./F.
CURLIM
HEAD SW
TRICK Ⓛ
TP2001
TP2002
IC2101 BA6435S
TORQ. CTL
HALL POWER
3PHASE GENERATOR
AMP
P. SIGNAL TORQUE DIRECTION
1ST AMP
DIRECTION LOGIC
IC2201 AN3814K
OSC
PRESET
INTERFACE
CHARGE DISCHARGE CIRCUIT
START MISS DET
BEMF DET
MODE SELECT
PG/FG DISP
STOP DET
EXTERNAL SYNC
MULTIPLICATION
POWER (NPN X3)
RATURATION DET
THERMAL SHORT DOWN
WAVE SHAPER
STOP
TORQUE CTL
PK2201 (NO CONNECTION)
P2201 (TO CYLINDER MOTOR)
PK2202
SERVO. 5V
PF. G
CYL. ET
CYL. GND
M. REG. 12V
CYLINDER DRIVE PACK C.B.A. (VEP02329A)
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11
12

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
POWER Section

CYLINDER SERVO SPEED LOOP

CYLINDER SERVO PHASE LOOP

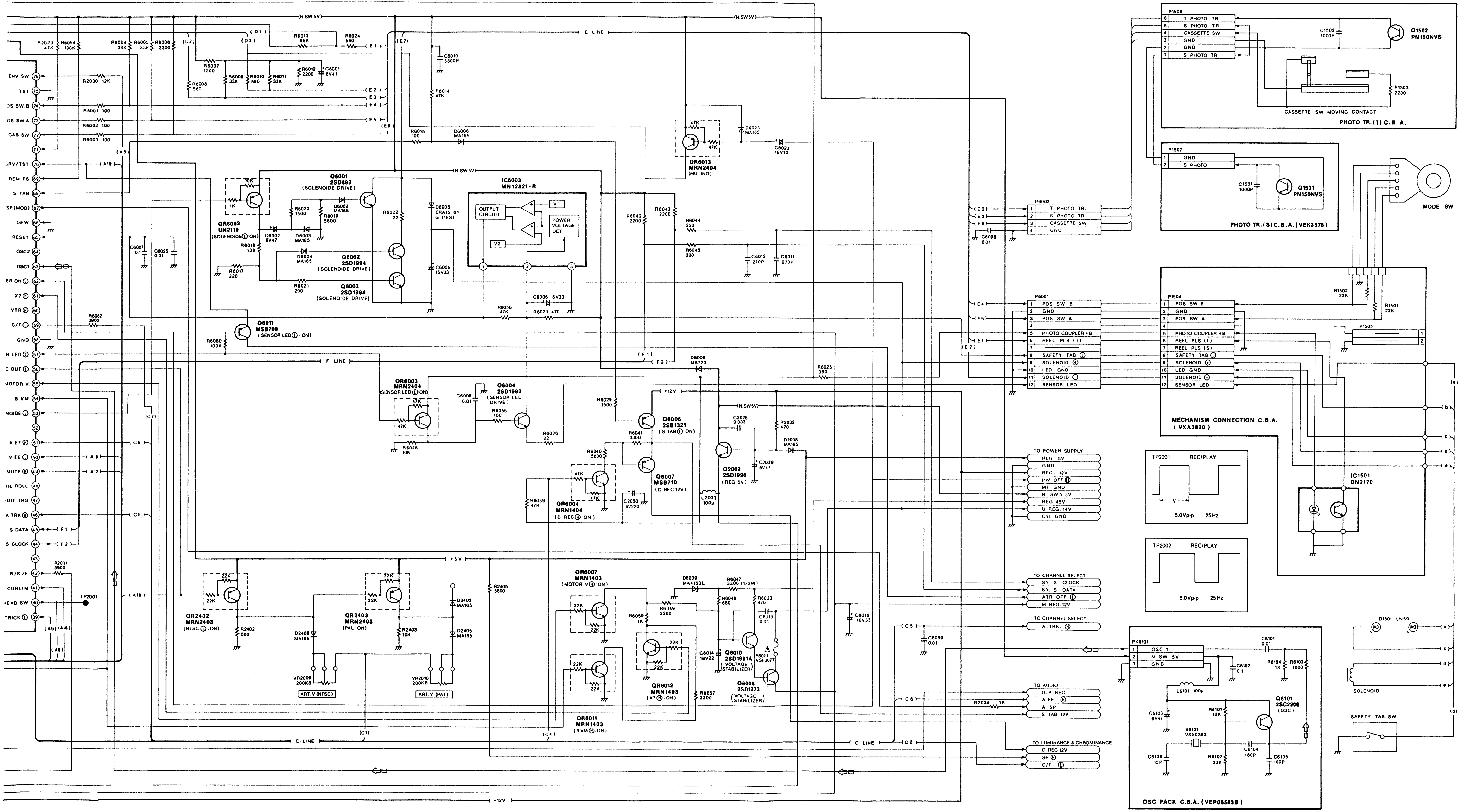
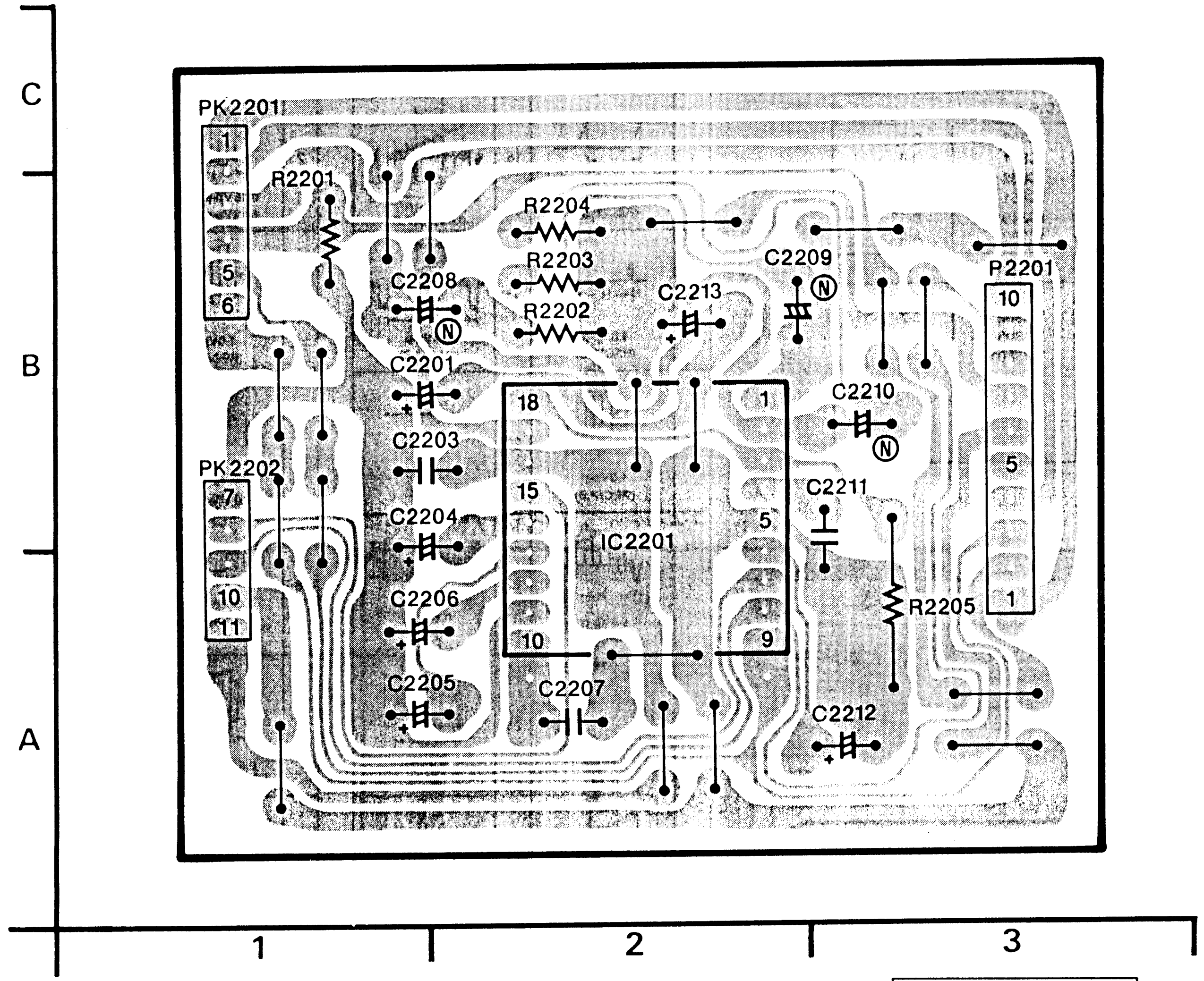


PHOTO TR. (T) C. B. A.
P1508
T. PHOTO TR
S. PHOTO TR
CASSETTE SW
GND
S. PHOTO TR
Q1502 PN150NVS
C1502 1000P
R1503 2200
CASSETTE SW MOVING CONTACT
PHOTO TR. (S) C.B.A. (VEK3578)
P1507
Q1501 PN150NVS
C1501 1000P
MODE SW
P6002
P6001
P1504
POS SW B
GND
POS SW A
PHOTO COUPLER +B
REEL PLS (T)
REEL PLS (S)
SAFETY TAB Ⓛ
SOLENOID ⊕
LED GND
SOLENOID ⊖
SENSOR LED
R1502 22K
R1501 22K
P1505
MECHANISM CONNECTION C.B.A. (VXA3820)
IC1501 DN2170
TP2001 REC/PLAY
5.0Vp-p 25Hz
TP2002 REC/PLAY
5.0Vp-p 25Hz
TO POWER SUPPLY
REG 5V
GND
REG 12V
PW OFF Ⓗ
MT GND
N. SW5.3V
REG 45V
U.REG 14V
CYL GND
TO CHANNEL SELECT
SY. S CLOCK
SY. S DATA
ATR OFF Ⓛ
M. REG. 12V
TO CHANNEL SELECT
A. TRK Ⓗ
TO AUDIO
D. A. REC
A. EE Ⓗ
A. SP
S. TAB 12V
TO LUMINANCE & CHROMINANCE
D. REC 12V
SP Ⓗ
C/T Ⓛ
PK6101
OSC 1
N. SW. 5V
GND
Q6101 2SC2206 (OSC)
X6101 VSX0383
L6101 100μ
OSC PACK C.B.A. (VEP06583B)
D1501 LN59
SOLENOID
SAFETY TAB SW
IC6003 MN12821-R
OUTPUT CIRCUIT
POWER VOLTAGE DET
Q6001 2SD893 (SOLENOIDE DRIVE)
QR6002 UN2119 (SOLENOIDE Ⓛ ON)
Q6002 2SD1994 (SOLENOIDE DRIVE)
Q6003 2SD1994 (SOLENOIDE DRIVE)
Q6011 MSB709 (SENSOR LED Ⓛ ON)
QR6013 MRN2404 (MUTING)
QR6003 MRN2404 (SENSOR LED Ⓛ ON)
Q6004 2SD1992 (SENSOR LED DRIVE)
Q6006 2SB1321 (S TAB Ⓛ ON)
Q6007 MSB710 (D REC 12V)
QR6004 MRN1404 (D REC Ⓗ ON)
Q2002 2SD1996 (REG 5V)
QR6007 MRN1403 (MOTOR V Ⓗ ON)
QR6011 MRN1403 (SVM Ⓗ ON)
QR6012 MRN1403 (X7 Ⓗ ON)
Q6010 2SD1991A (VOLTAGE STABILIZER)
Q6008 2SD1273 (VOLTAGE STABILIZER)
QR2402 MRN2403 (NTSC Ⓛ ON)
QR2403 MRN2403 (PAL: ON)
VR2009 200KB ART. V (NTSC)
VR2010 200KB ART. V (PAL)
TP2001
ENV SW
TST
OS SW B
OS SW A
CAS SW
REM PS
S TAB
DEW
RESET
OSC2
OSC1
X7 Ⓗ
VTR Ⓗ
C/T Ⓛ
GND
S. VM
A EE Ⓗ
V EE Ⓗ
MUTE Ⓗ
A. TRK Ⓗ
S. DATA
S. CLOCK
R/S/F
CURLIM
TRICK Ⓛ
N.SW5V
E - LINE
F - LINE
C - LINE
+5V
+12V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

12 13 14 15 16 17 18 19 20 21 22 23

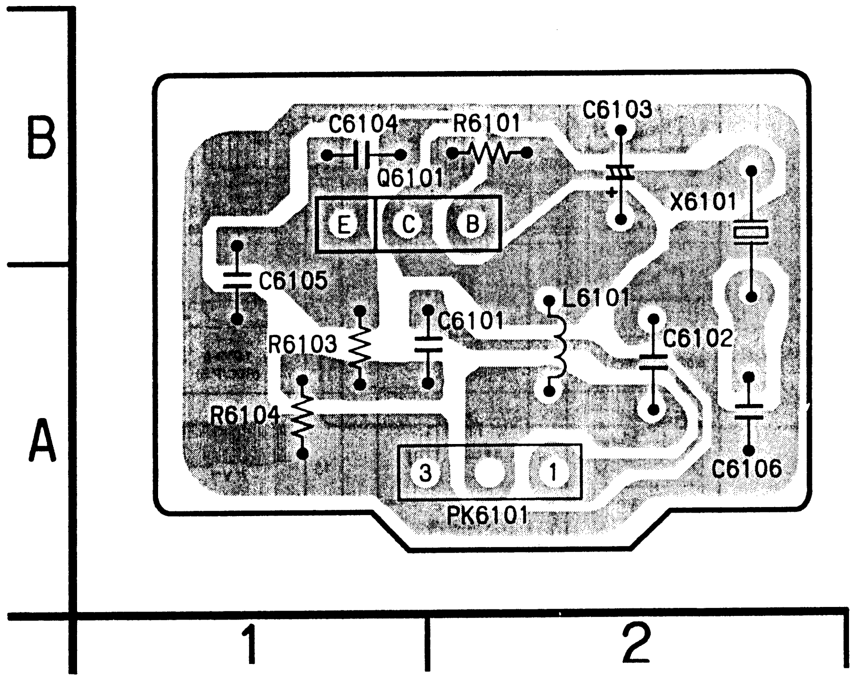
3-6. CYLINDER DRIVE PACK C.B.A. (VEP02329A)



CYLINDER DRIVE PACK C.B.A.	
Integrated Circuit	
IC2201	B-2
Connector	
P2201 PK2201 PK2202	B-3 C-1 B-1

ADDRESS INFORMATION

3-7. OSC PACK C.B.A. (VEP06583B)



OSC PACK C.B.A.	
Transistor	
Q6101	B-1
Connector	
PK6101	A-2

ADDRESS INFORMATION

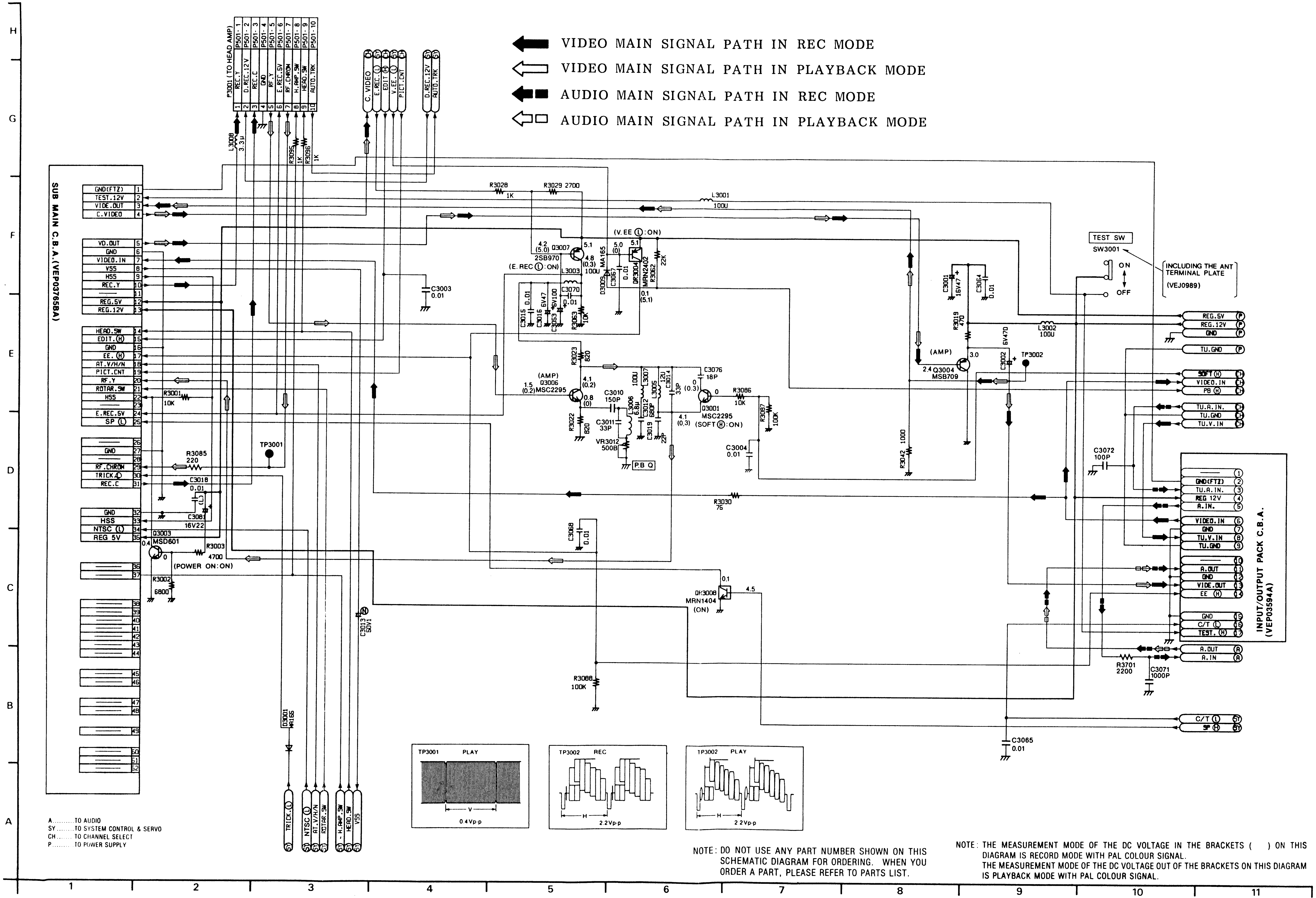
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART

REF. NO.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	5.1	0	0	0.1	0	1.3	2.5	3.3	3.2	2.6	4.3	1.7	2.5	4.3	2.5	2.5	2.5	5.1	0	2.5
PLAY	5.1	5.1	0	0.1	0	1.4	2.5	3.3	3.3	2.5	2.5	2.5	2.5	4.3	2.5	2.5	2.5	5.1	0	2.5
FF	5.1	0	0	0.1	0	1.4	2.5	3.3	3.3	2.6	4.3	1.7	2.5	2.3	2.5	2.5	—	5.1	0	2.5
REF. NO.	**IC2001**																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	2.5	0	2.5	2.5	1.2	2.9	3.9	2.1	0	5.1	0	0	0	0	3.4	0	5.1	0	5.1	0
PLAY	2.5	0	2.5	2.5	1.2	2.5	4.1	3.0	5.1	1.1	3.0	0	0	0	3.1	0.1	5.1	5.0	5.1	5.1
FF	2.5	0	2.5	2.5	1.4	1.5	3.7	3.4	3.0	5.1	0.1	0	0	0	3.2	0.2	5.1	0	5.1	0
REF. NO.	**IC2001**																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	4.9	2.1	0	4.7	4.2	0	0	5.1	0	0	5.1	0	5.1	0	0	5.1	4.7	0	5.1	0
PLAY	5.0	0	0	4.9	4.5	0	0	5.1	0	5.1	0	5.1	5.1	0	5.1	5.1	4.7	0	5.1	0
FF	5.0	0	0	4.6	4.6	0	0	5.1	0	0	5.1	0	5.1	0	0	5.1	4.7	0	5.1	0
REF. NO.	**IC2001**																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76				
STOP	0	0	—	—	5.0	0	0	0.5	5.0	4.5	5.0	2.0	5.1	2.0	0	0				
PLAY	0	0	—	—	5.1	0	0	0.5	5.0	4.5	5.1	2.0	0	5.1	0	0.1				
FF	0	0	—	—	5.1	0	0	0.5	5.0	4.5	5.1	2.0	5.1	2.0	0	0				
REF. NO.	**IC2101**																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	7.1	0	7.1	1.4	2.0	2.1	2.1	2.0	2.1	2.1	2.1	0	5.1	3.7	2.7	2.6	5.1	0	0.4	0
PLAY	2.3	0.1	2.3	1.3	2.1	2.1	2.1	2.1	2.1	2.1	0	0	5.0	3.8	2.7	2.5	5.0	0.6	0.4	0.1
FF	3.1	0	3.1	1.3	2.1	2.1	2.1	2.1	2.1	2.1	0	0	5.0	3.8	2.7	2.5	5.0	0.6	0.4	0
REF. NO.	**IC2101**																			
MODE	21	22	23	24																
STOP	0	0.6	7.1	14.0																
PLAY	0	0.6	2.3	10.3																
FF	0	0.6	3.1	14.0																
REF. NO.	**IC2201**																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	14.0	14.0	0	0	0	2.6	0	0.5	0.4	1.2	5.1	4.3	4.3	3.9	5.1	14.0	14.0	0		
PLAY	10.5	10.5	0	0.5	0	2.6	0.3	0.5	0.5	2.8	5.1	3.6	3.6	3.6	1.2	10.1	10.5	0		
FF	14.0	14.0	0	0	0	2.6	0	0.4	0.7	1.2	5.1	4.3	4.3	3.9	5.1	13.9	13.9	0		
REF. NO.	**IC6003**																			
MODE	1	2	3																	
STOP	5.1	5.1	0																	
PLAY	5.1	5.1	0																	
FF	5.1	5.1	0																	

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART

REF. NO.	Q2001			Q2002			Q2003			Q6001			Q6002			Q6003		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0.3	2.7	1.0	5.2	5.4	5.8	5.1	4.4	5.1	0	15.7	0.1	0.2	15.7	0.4	0	0.3	0
PLAY	0.4	2.6	1.0	5.2	5.4	5.8	5.1	4.7	5.1	0	15.6	0.2	0.2	15.6	0.3	0	0.2	0
FF	0.4	2.6	0.9	5.2	5.4	5.8	5.1	4.4	5.1	0	15.7	0.2	0.4	15.7	0.5	0	0.4	0
REF. NO.	**Q6004**			**Q6006**			**Q6007**			**Q6008**			**Q6010**			**Q6011**		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0.8	14.0	0.6	12.2	12.2	11.5	12.2	0	12.2	14.0	15.7	14.5	14.5	43.4	15.0	4.5	0	4.6
PLAY	0.8	10.3	0.6	12.2	12.2	11.5	12.2	−0.2	12.2	10.3	15.6	10.9	10.9	43.4	11.4	4.8	0	4.4
FF	0.8	14.0	0.6	12.2	12.2	11.5	12.2	0	12.2	14.0	15.6	14.6	14.6	43.4	15.1	4.6	0	4.6
REF. NO.	**QR2002**			**QR2004**			**QR2005**			**QR2402**			**QR2403**			**QR6002**		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	0	0	0	2.5	0	2.5	0	5.1	0	5.1	5.1	5.1	0	5.1	0	5.1
PLAY	0	0	5.0	0	0	2.5	0	2.5	0	5.1	0	5.1	5.1	5.1	0	5.1	0	5.1
FF	0	0.9	0	0	0	2.5	0	2.5	0	5.1	0	5.1	5.1	5.1	0	5.1	0	5.1
REF. NO.	**QR6003**			**QR6004**			**QR6007**			**QR6011**			**QR6012**			**QR6013**		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	5.1	0.6	4.5	0	12.2	0	0	15.0	0	0	15.0	0	0	15.0	0	5.1	3.3	5.1
PLAY	5.0	0.6	4.6	0	12.2	0	0	0.1	5.0	0	0.1	0	0	0.1	0	5.1	3.3	5.1
FF	5.0	0.6	4.5	0	12.2	0	0	15.1	0	0	15.1	0	0	15.1	0	5.1	3.3	5.1

3-8. LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM



H
G
F
E
D
C
B
A
P3001 (TO HEAD AMP)
1 REC.Y P501-1
2 D.REC.12V P501-2
3 REC.C P501-3
4 GND P501-4
5 RF.Y P501-5
6 E.REC.5V P501-6
7 RF.CHROM P501-7
8 H.AMP.SW P501-8
9 HEAD.SW P501-9
10 AUTO.TRK P501-10
C.VIDEO
E.REC.Ⓛ
EDIT Ⓗ
V.EE Ⓛ
PICT.CNT
D.REC.12V
AUTO.TRK
L3008 3.3μ
R3095 1K
R3096 1K
SUB MAIN C.B.A. (VEP03765BA)
GND(FTZ) 1
TEST.12V 2
VIDE.OUT 3
C.VIDEO 4
VD.OUT 5
GND 6
VIDEO.IN 7
VSS 8
HSS 9
REC.Y 10
11
REG.5V 12
REG.12V 13
HEAD.SW 14
EDIT.Ⓗ 15
GND 16
EE.Ⓗ 17
AT.V/H/N 18
PICT.CNT 19
RF.Y 20
ROTAR.SW 21
HSS 22
23
E.REC.5V 24
SP Ⓛ 25
26
GND 27
28
RF.CHROM 29
TRICK.Ⓛ 30
REC.C 31
GND 32
HSS 33
NTSC Ⓛ 34
REG 5V 35
36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
R3001 10K
R3085 220
TP3001
C3018 0.01
C3081 16V22
Q3003 MSD601
R3003 4700
(POWER ON:ON)
R3002 6800
C3003 0.01
R3028 1K
R3029 2700
L3001 100U
(V.EE Ⓛ:ON)
Q3007 2SB970
(E.REC Ⓛ:ON)
L3003 100U
D3009 MA165
C3067 0.01
DR3004 MRN2402
R3062 22K
C3015 0.01
C3016 6V47
C3053 6V100
C3070 0.01
R3063 10K
R3023 820
(AMP) Q3006 (0.2)MSC2295
R3022 820
C3010 150P
C3011 33P
L3006 6.8U
L3007 100U
C3012 680P
C3019 22P
L3005 12U
C3014 33P
VR3012 500B
P.B Q
C3076 18P
Q3001 MSC2295 (SOFT Ⓗ:ON)
R3086 10K
R3087 100K
C3004 0.01
R3030 75
C3068 0.01
DR3008 MRN1404 (ON)
R3088 100K
C3013 50V1
D3001 MA165
R3042 1000
TEST SW SW3001 ON OFF
(INCLUDING THE ANT TERMINAL PLATE (VEJ0989))
C3001 16V47
C3064 0.01
R3019 470
C3002 6V470
L3002 100U
TP3002
(AMP) Q3004 MSB709
REG.5V Ⓟ
REG.12V Ⓟ
GND Ⓟ
TU.GND Ⓟ
SOFT Ⓗ Ⓒ
VIDEO.IN Ⓒ
PB Ⓗ Ⓒ
TU.A.IN. Ⓒ
TU.GND Ⓒ
TU.V.IN Ⓒ
C3072 100P
GND(FTZ) 2
TU.A.IN. 3
REG 12V 4
A.IN. 5
VIDEO.IN 6
GND 7
TU.V.IN 8
TU.GND 9
A.OUT 11
GND 12
VIDE.OUT 13
EE Ⓗ 14
GND 15
C/T Ⓛ 16
TEST. Ⓗ 17
INPUT/OUTPUT PACK C.B.A. (VEP03594A)
A.OUT Ⓐ
A.IN Ⓐ
R3701 2200
C3071 1000P
C/T Ⓛ
SP Ⓗ
C3065 0.01
TRICK Ⓛ
NTSC Ⓛ
AT.V/H/N
ROTAR.SW
H.AMP.SW
HEAD.SW
VSS
TP3001 PLAY V 0.4Vp-p
TP3002 REC H 2.2Vp-p
TP3002 PLAY H 2.2Vp-p
1 2 3 4 5 6 7 8 9 10 11

⬅ VIDEO MAIN SIGNAL PATH IN REC MODE

⇦ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

⬅■ AUDIO MAIN SIGNAL PATH IN REC MODE

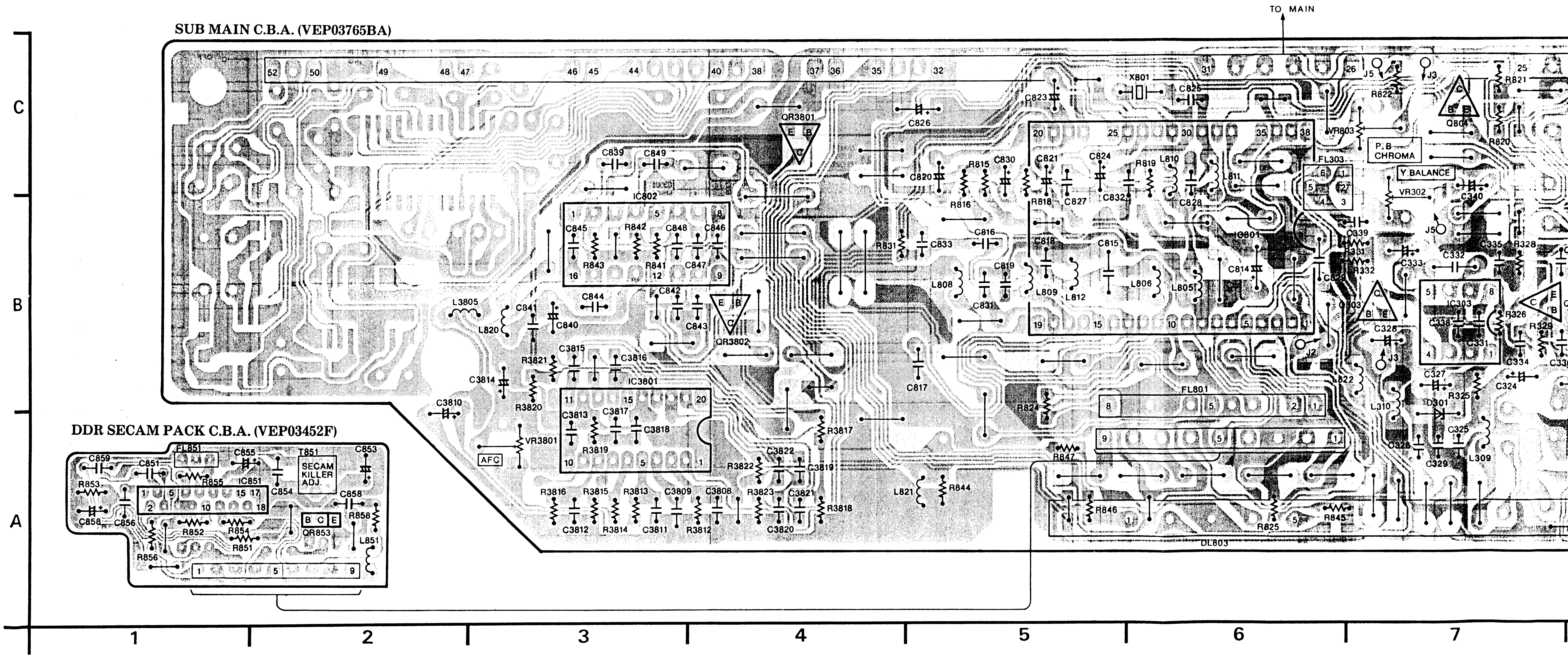
⇦□ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

A.........TO AUDIO
SY.........TO SYSTEM CONTROL & SERVO
CH.........TO CHANNEL SELECT
P.........TO POWER SUPPLY

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

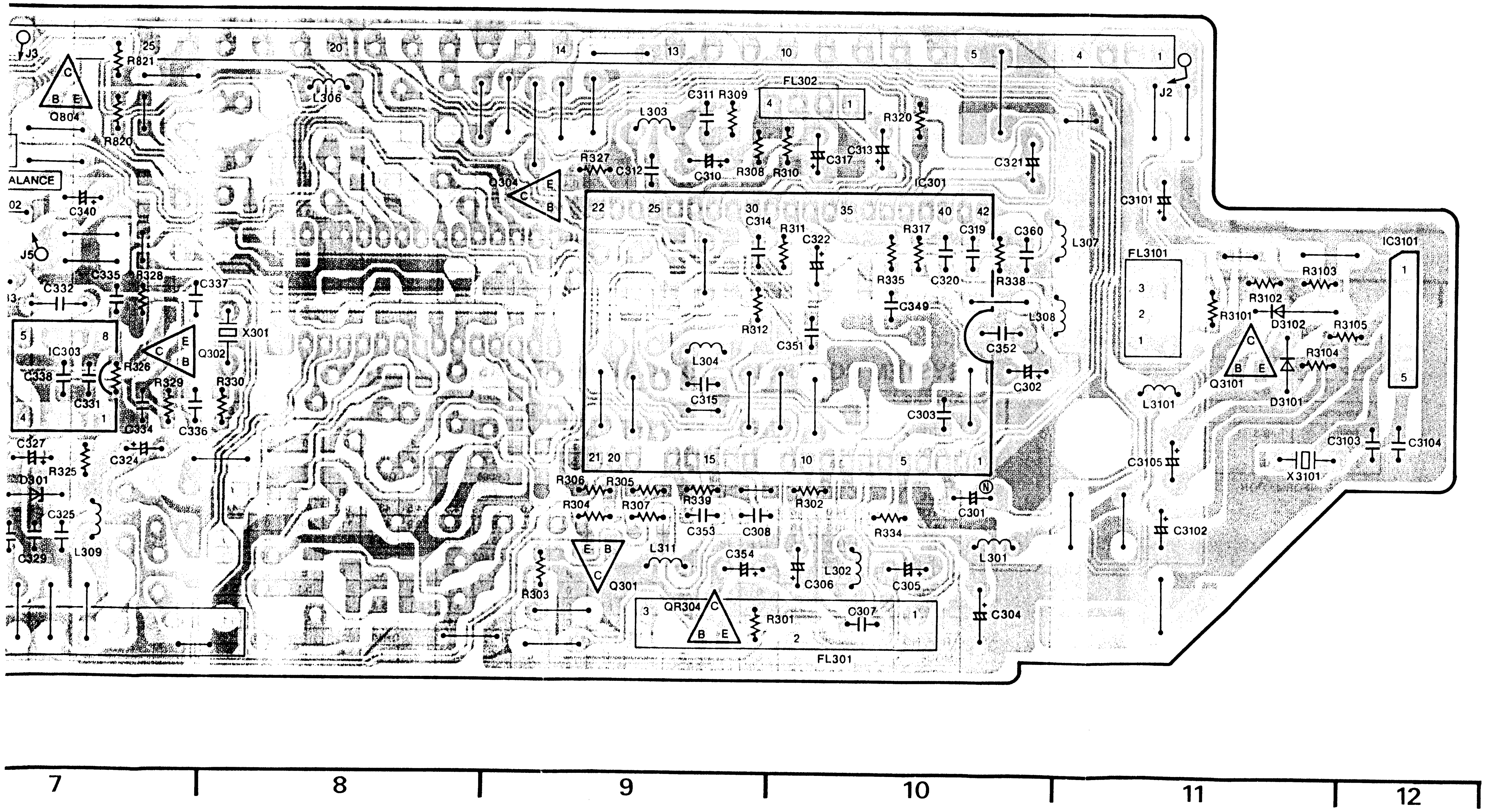
3-9. SUB MAIN C.B.A. (VEP03765BA)


TO MAIN
SUB MAIN C.B.A. (VEP03765BA)
DDR SECAM PACK C.B.A. (VEP03452F)
C
B
A
1
2
3
4
5
6
7
IC802
IC3801
IC801
IC303
IC851
QR3801
QR3802
QR853
Q804
Q303
X801
FL303
FL801
FL851
T851
DL803
VR803
VR302
VR3801
P.B CHROMA
Y.BALANCE
SECAM KILLER ADJ.
AFC
J2
J3
J5
L3805
L820
L821
L808
L809
L812
L806
L805
L810
L811
L310
L309
L851
D301
B C E

Back Page:
CYLINDER DRIVE/
OSC/LUMINANCE &
CHROMINANCE Section

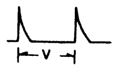
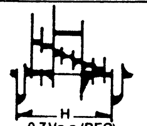
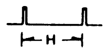
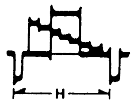
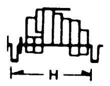
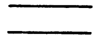
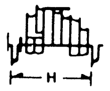
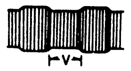
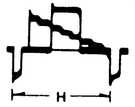
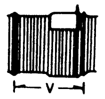
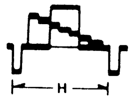
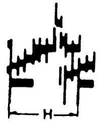
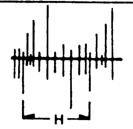
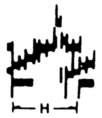
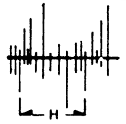
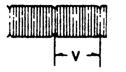
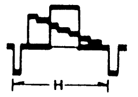
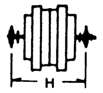
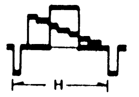
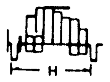
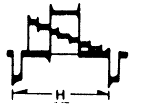
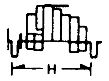
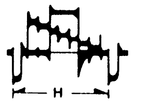
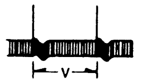
SUB MAIN C.B.A.			
Transistor		IC303	B-7
Q301	A-9	IC801	B-6
Q302	B-7	IC802	B-3
Q303	B-7	IC851	A-1
Q304	C-9	IC3101	B-10
Q804	C-7	IC3801	A-3
Q3101	B-11	**Adjustment**	
Transistor & Resistor		T851	A-2
QR304	A-9	VR302	C-7
QR853	A-2	VR803	C-7
QR3801	C-4	VR3801	A-3
QR3802	B-4		
Integrated Circuit			
IC301	B-10		

ADDRESS INFORMATION

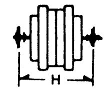
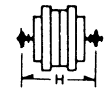
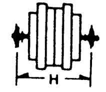
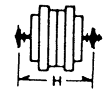
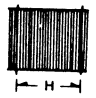
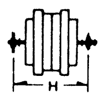
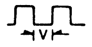
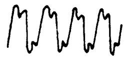
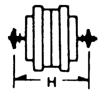
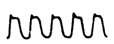
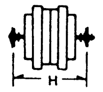
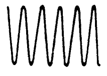
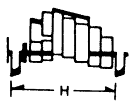
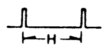
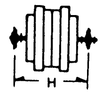
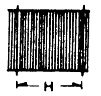
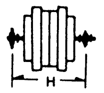
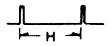
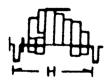
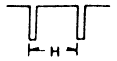
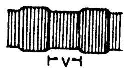
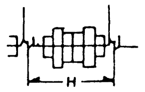
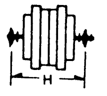
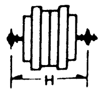


J3
R821
25
20
14
13
10
5
4
1
Q804
B
E
L306
R820
FL302
C311
R309
L303
R320
J2
R327
C312
C310
R308
R310
C317
C313
C321
IC301
Q304
E
C
B
ALANCE
C340
22
25
30
35
40
42
C314
R311
C322
R317
C319
C360
L307
C3101
FL3101
IC3101
J5
C335
R328
C337
R335
C320
R338
R3103
C332
C349
R3102
X301
R312
L308
R3101
D3102
R3105
IC303
Q302
C351
C352
R3104
C338
R326
L304
Q3101
C302
C331
R329
R330
C315
D3101
L3101
C303
C336
C334
C327
C324
21
20
15
C3103
C3104
R325
C3105
X3101
D301
R306
R305
R339
R302
C325
R304
R307
C353
C308
C301
R334
C3102
L309
L311
Q301
C354
C306
L302
C305
L301
C329
R303
C304
QR304
R301
C307
FL301
7
8
9
10
11
12

IC301 (VEFH03D)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
1	 2.0Vp-p (REC/P.B)	16	 0.7Vp-p (REC) 0.6Vp-p (P.B)
2	 4.8Vp-p (REC/P.B)	17	 0.9Vp-p (REC/P.B)
3	 1.0Vp-p (REC/P.B)	22	 1.2Vp-p (REC)
5	 0.9Vp-p (REC)	23	 0.1Vp-p (P.B)
5	 1.2Vp-p (P.B)	26	 0.9Vp-p (P.B)
7, 8	 0.48Vp-p (REC/P.B)	28	 0.4Vp-p (P.B)
9	 0.66Vp-p (REC)	30	 1.2Vp-p (P.B)
10	 0.6Vp-p(REC)	33	 0.26Vp-p (P.B)
11	 0.3Vp-p (REC/P.B)	35	 0.4Vp-p (P.B)
12	 0.07Vp-p(REC)	37, 38	 0.9Vp-p (REC/P.B)
13	 0.9Vp-p (REC/P.B)	40	 2.3Vp-p (REC/P.B)
15	 0.9Vp-p (REC/P.B)	41	 0.5Vp-p (REC) 0.56Vp-p (P.B)

IC801 (VEFH04F)

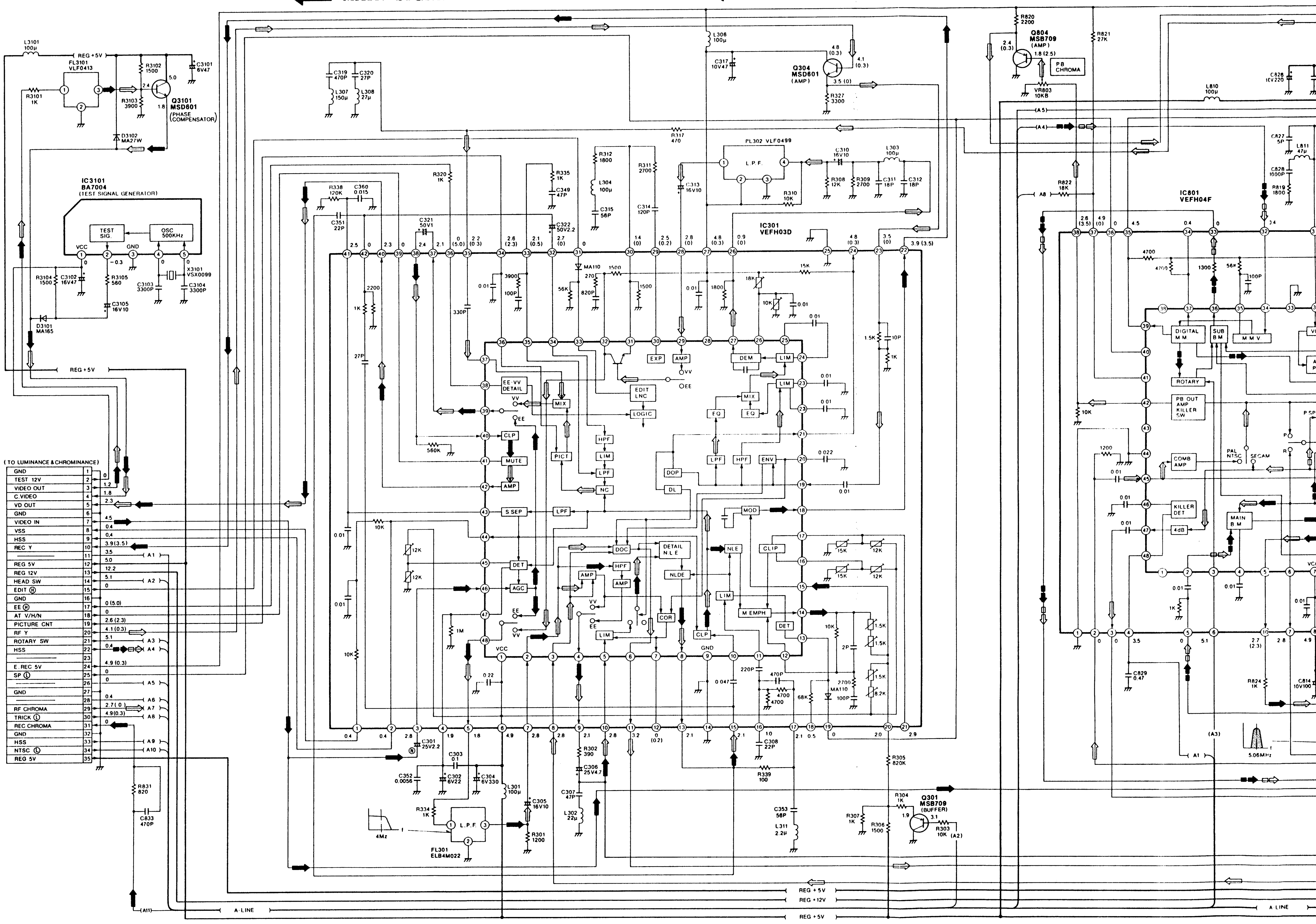
PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	 0.16Vp-p (REC) 0.12Vp-p (P.B)	15	 0.48Vp-p (REC)
3	 1.0Vp-p (REC/P.B)	17	 0.44Vp-p (REC) 0.2Vp-p (P.B)
5	 0.19Vp-p (REC/P.B)	19	 0.28Vp-p (REC/P.B)
6	 5.0Vp-p (REC/P.B)	28	 0.8Vp-p (REC/P.B)
7	 0.6Vp-p (REC) 0.5Vp-p (P.B)	29	 1.1Vp-p (REC/P.B)
9	 0.36Vp-p (REC) 0.3Vp-p (P.B)	31	 0.8Vp-p (REC/P.B)
10	 1.1Vp-p (REC)	32	 4.8Vp-p (REC/P.B)
10	 1.2Vp-p (P.B)	33	 1.0Vp-p (REC/P.B)
11	 0.4Vp-p (REC) 0.16Vp-p (P.B)	34	 4.8Vp-p (REC/P.B)
12	 1.0Vp-p (REC/P.B)	35	 4.8Vp-p (REC/P.B)
13	 0.4Vp-p (P.B)	37	 0.3Vp-p (P.B)
14	 0.32Vp-p (REC) 0.16Vp-p (P.B)	38	 1.0Vp-p (P.B)

3-10. SUB MAIN SCHEMATIC DIAGRAM

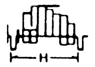
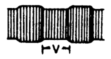
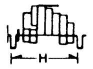
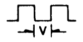
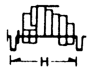
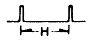
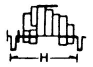
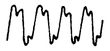
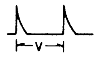
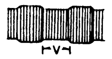
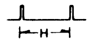
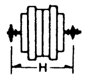
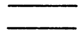
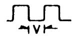
MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

5.06MHz


L3101
100μ
REG +5V
FL3101
VLF0413
R3101
1K
R3102
1500
C3101
6V47
R3103
3900
Q3101
MSD601
(PHASE COMPENSATOR)
D3102
MA27W
IC3101
BA7004
(TEST SIGNAL GENERATOR)
TEST SIG.
OSC 500KHz
VCC
GND
R3104
1500
C3102
16V47
R3105
560
C3103
3300P
C3104
3300P
X3101
VSX0099
C3105
16V10
D3101
MA165
(TO LUMINANCE & CHROMINANCE)
GND
TEST 12V
VIDEO OUT
C.VIDEO
VD OUT
GND
VIDEO IN
VSS
HSS
REC Y
REG 5V
REG 12V
HEAD SW
EDIT Ⓗ
GND
EE Ⓗ
AT V/H/N
PICTURE CNT
RF Y
ROTARY SW
HSS
E.REC 5V
SP Ⓛ
GND
RF CHROMA
TRICK Ⓛ
REC CHROMA
GND
HSS
NTSC Ⓛ
REG 5V
R831
820
C833
470P
C319
470P
C320
27P
L307
150μ
L308
27μ
R338
120K
C360
0.015
C351
22P
R320
1K
C321
50V1
R312
1800
R311
2700
R335
1K
C349
47P
C322
50V2.2
L304
100μ
C315
56P
C314
120P
C313
16V10
L306
100μ
C317
10V47
Q304
MSD601
(AMP)
R327
3300
R317
470
PL302 VLF0499
L.P.F.
C310
16V10
L303
100μ
R308
12K
R309
2700
C311
18P
C312
18P
R310
10K
IC301
VEFH03D
MA110
EE·VV DETAIL
MIX
EDIT LNC
LOGIC
EXP
AMP
DEM
LIM
CLP
MUTE
AMP
S.SEP
LPF
HPF
NC
PICT
DET
AGC
DOC
DETAIL N.L.E
NLDE
COR
HPF
AMP
EQ
LPF
HPF
ENV
DOP
DL
MOD
NLE
CLIP
M.EMPH
DET
VCC
GND
C301
25V2.2
C303
0.1
C302
6V22
C304
6V330
C352
0.0056
L301
100μ
C305
16V10
R334
1K
L.P.F.
FL301
ELB4M022
4Mz
R301
1200
R302
390
C306
25V4.7
C307
47P
L302
22μ
C353
56P
L311
2.2μ
R339
100
C308
22P
R305
820K
R304
1K
Q301
MSB709
(BUFFER)
R307
1K
R306
1500
R303
10K
MA110
R820
2200
Q804
MSB709
(AMP)
PB CHROMA
VR803
10KB
R821
27K
L810
100μ
C828
10V220
C827
5P
L811
47μ
C826
1000P
R819
1800
R822
18K
IC801
VEFH04F
DIGITAL M.M
SUB B.M
M.M.V.
ROTARY
PB OUT AMP KILLER SW
COMB AMP
KILLER DET
MAIN B.M
4dB
PAL
NTSC
SECAM
C829
0.47
R824
1K
C814
10V100
5.06MHz
REG +5V
REG +12V
REG +5V
A·LINE

WAVEFORM OF SUB MAIN C.B.A. PINS

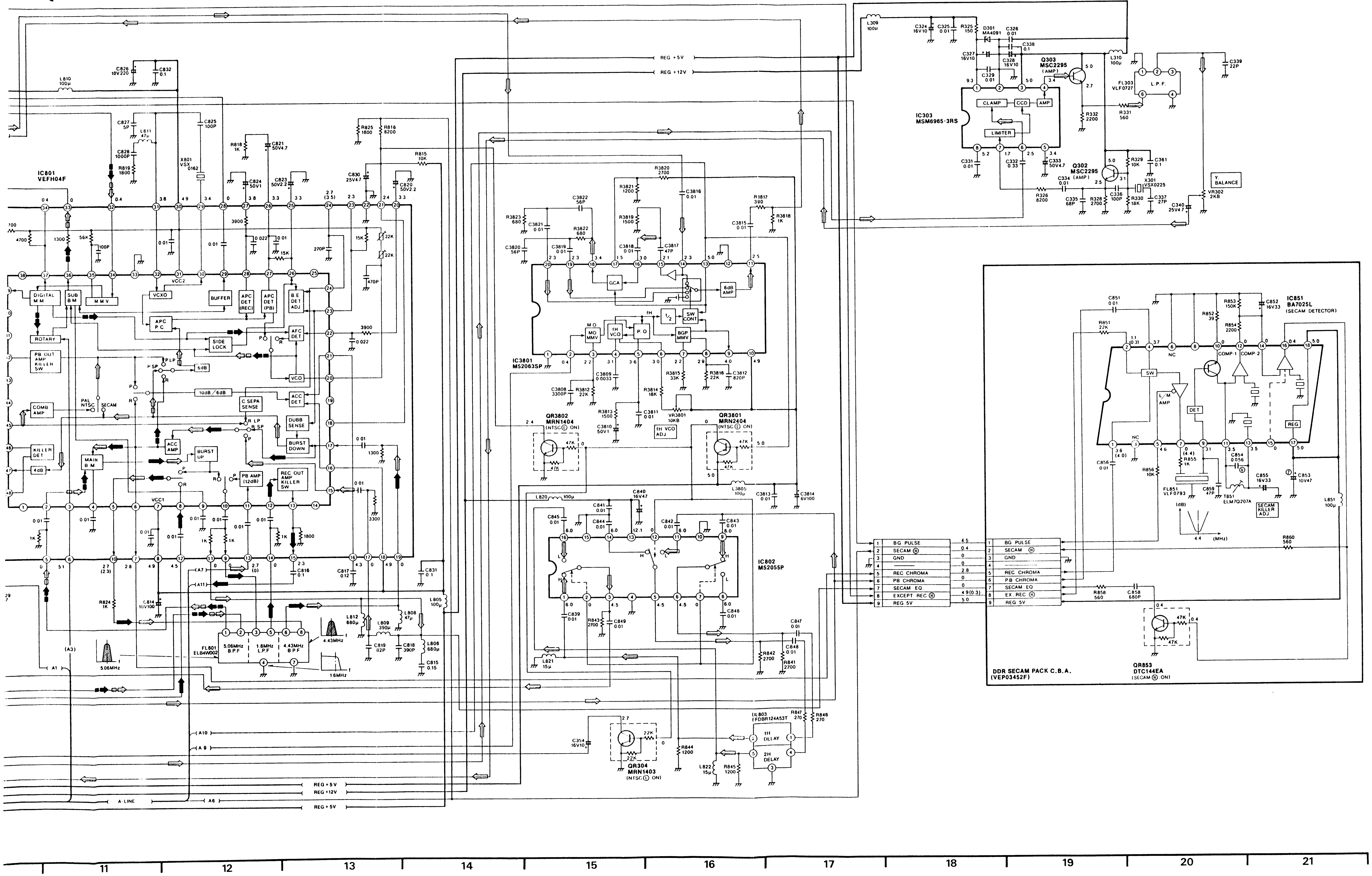
PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
3	 2.3Vp-p (REC/P.B)	20	 0.8Vp-p (P.B)
4	 1.2Vp-p (REC/P.B)	21	 5.0Vp-p (REC/P.B)
5	 2.3Vp-p (REC/P.B)	22	 4.6Vp-p (REC/P.B)
7	 1.0Vp-p (REC/P.B)	26	 0.8Vp-p (REC/P.B)
8	 2.0Vp-p (REC/P.B)	29	 0.4Vp-p (P.B)
9	 4.6Vp-p (REC/P.B)	31	 0.34Vp-p (REC)
10	 1.2Vp-p (REC)		
14	 5.0Vp-p (REC/P.B)		

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

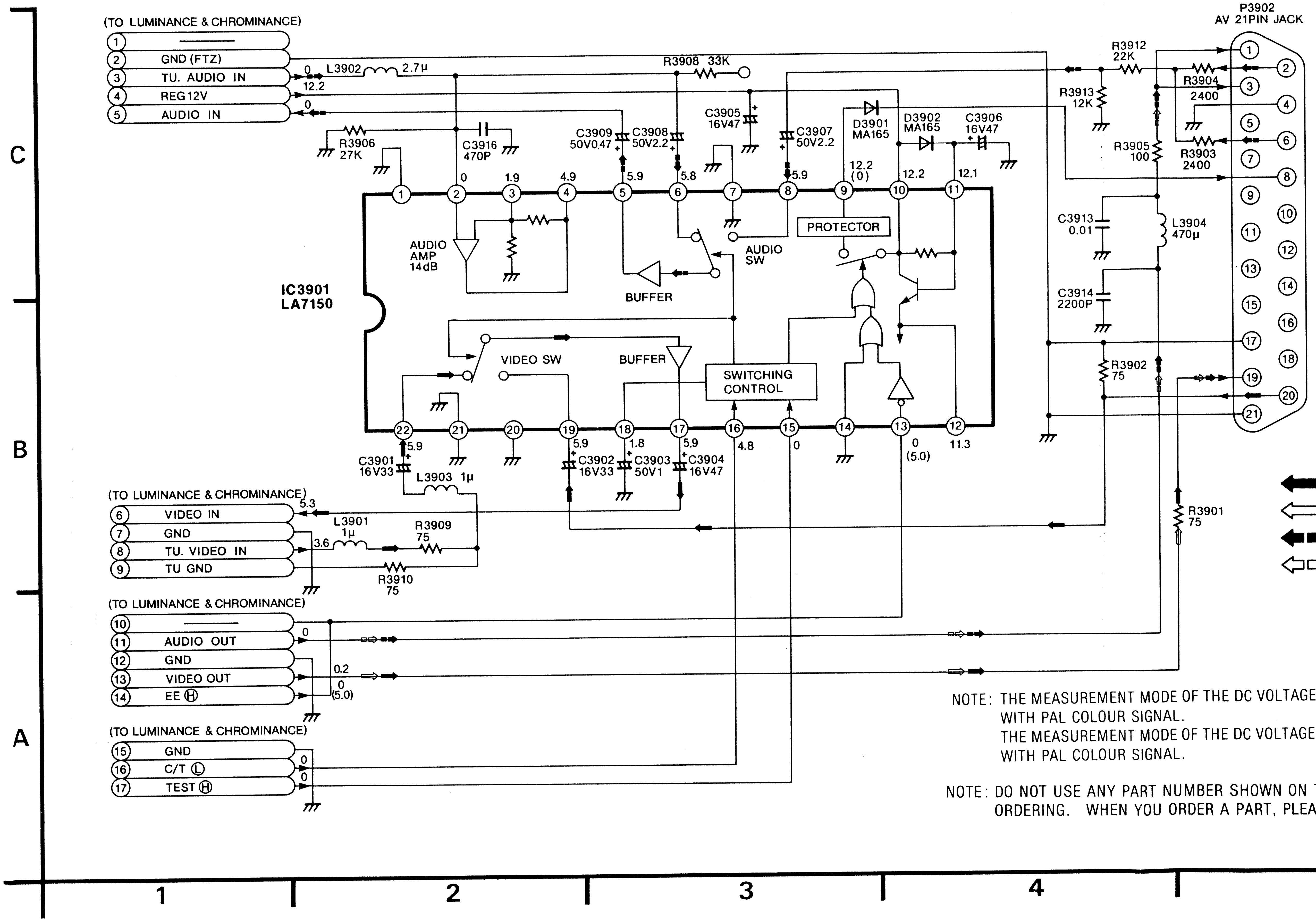
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (　　) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

◀■ 5.06MHz PHASE ROTATIONAL SIGNAL IN REC MODE

◁□ 5.06MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE


IC801
VEFH04F
DIGITAL MM
SUB BM
M M V
VCXO
BUFFER
APC DET (REC)
APC DET (PB)
B E DET ADJ
APC P C
SIDE LOCK
AFC DET
VCO
ROTARY
PB OUT AMP KILLER SW
COMB AMP
PAL NTSC
SECAM
C SEPA SENSE
ACC DET
DUBB SENSE
BURST DOWN
KILLER DET
4dB
MAIN BM
ACC AMP
BURST UP
PB AMP (12dB)
REC OUT AMP KILLER SW
6dB
10dB / 6dB
VCC1
VCC2
X801 VSX 0162
L810 100μ
L811 47μ
FL801 ELB4W002
5.06MHz B.P.F
1.6MHz L.P.F
4.43MHz B.P.F
4.43MHz
5.06MHz
1.6MHz
L805 100μ
L806 680μ
L808 47μ
L809 390μ
L812 680μ
(A1)
(A3)
(A6)
(A7)
(A9)
(A10)
(A11)
A LINE
REG +5V
REG +12V
IC3801
M52083SP
GCA
6dB AMP
MO MMV
1H VCO
P O
1/2
SW CONT
BGP MMV
fH
QR3802
MRN1404
(NTSC Ⓛ ON)
QR3801
MRN2404
(NTSC Ⓛ ON)
VR3801 10KB
1H VCO ADJ
IC802
M52055P
L820 100μ
L821 15μ
L822 15μ
L3805 100μ
QR304
MRN1403
(NTSC Ⓛ ON)
DL803
EFDBR124A53T
1H DELAY
2H DELAY
L309 100μ
D301 MA4091
Q303
MSC2295
(AMP)
IC303
MSM6965-3RS
CLAMP
CCD
AMP
LIMITER
L310 100μ
FL303 VLF0727
L.P.F.
Q302
MSC2295
(AMP)
X301 VSX0225
Y BALANCE
VR302 2KB
IC851
BA7025L
(SECAM DETECTOR)
COMP 1
COMP 2
SW
L/M AMP
DET
REG
FL851 VLF0793
T851 ELM7Q207A
SECAM KILLER ADJ.
4.4 (MHz)
(dB)
L851 100μ
QR853
DTC144EA
(SECAM Ⓗ ON)
DDR SECAM PACK C.B.A.
(VEP03452F)
1 BG PULSE
2 SECAM Ⓗ
3 GND
4
5 REC CHROMA
6 PB CHROMA
7 SECAM EQ.
8 EXCEPT REC Ⓗ
9 REG 5V
8 EX REC Ⓗ
11
12
13
14
15
16
17
18
19
20
21

3-11. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM


(TO LUMINANCE & CHROMINANCE)
① ———
② GND (FTZ)
③ TU. AUDIO IN
④ REG 12V
⑤ AUDIO IN
L3902 2.7µ
0
12.2
0
R3906 27K
C3916 470P
R3908 33K
C3909 50V0.47
C3908 50V2.2
C3905 16V47
C3907 50V2.2
D3901 MA165
D3902 MA165
C3906 16V47
0
1.9
4.9
5.9
5.8
5.9
12.2 (0)
12.2
12.1
AUDIO AMP 14dB
BUFFER
AUDIO SW
PROTECTOR
IC3901
LA7150
VIDEO SW
BUFFER
SWITCHING CONTROL
5.9
5.9
1.8
5.9
4.8
0
0 (5.0)
11.3
C3901 16V33
L3903 1µ
C3902 16V33
C3903 50V1
C3904 16V47
(TO LUMINANCE & CHROMINANCE)
5.3
⑥ VIDEO IN
⑦ GND
⑧ TU. VIDEO IN
⑨ TU GND
L3901 1µ
3.6
R3909 75
R3910 75
(TO LUMINANCE & CHROMINANCE)
⑩ ———
⑪ AUDIO OUT
⑫ GND
⑬ VIDEO OUT
⑭ EE Ⓗ
0
0.2
0 (5.0)
(TO LUMINANCE & CHROMINANCE)
⑮ GND
⑯ C/T Ⓛ
⑰ TEST Ⓗ
0
0
P3902
AV 21PIN JACK
R3912 22K
R3913 12K
R3904 2400
R3905 100
R3903 2400
C3913 0.01
L3904 470µ
C3914 2200P
R3902 75
R3901 75
C
B
A
1
2
3
4
5

1	AUDIO OUT CH2
2	AUDIO IN CH2
3	AUDIO OUT CH1
4	AUDIO GND
5	—
6	AUDIO IN CH1
7	—
8	P.B +12V
9	—
10	—
11	—
12	—
13	—
14	—
15	—
16	—
17	GND
18	—
19	VIDEO OUT
20	VIDEO IN
21	GND

◀ VIDEO MAIN SIGNAL PAT

◁ VIDEO MAIN SIGNAL PAT

◀■ AUDIO MAIN SIGNAL PAT

◁□ AUDIO MAIN SIGNAL PA

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS
WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS D
WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR
ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
SUB MAIN Section

AUDIO OUT CH2
AUDIO IN CH2
AUDIO OUT CH1
AUDIO GND
———
AUDIO IN CH1
———
P.B +12V
———
———
———
———
———
———
———
———
GND
———
VIDEO OUT
VIDEO IN
GND

) MAIN SIGNAL PATH IN REC MODE

) MAIN SIGNAL PATH IN PLAYBACK MODE

) MAIN SIGNAL PATH IN REC MODE

O MAIN SIGNAL PATH IN PLAYBACK MODE

RACKETS (   ) ON THIS DIAGRAM IS RECORD MODE

HE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE

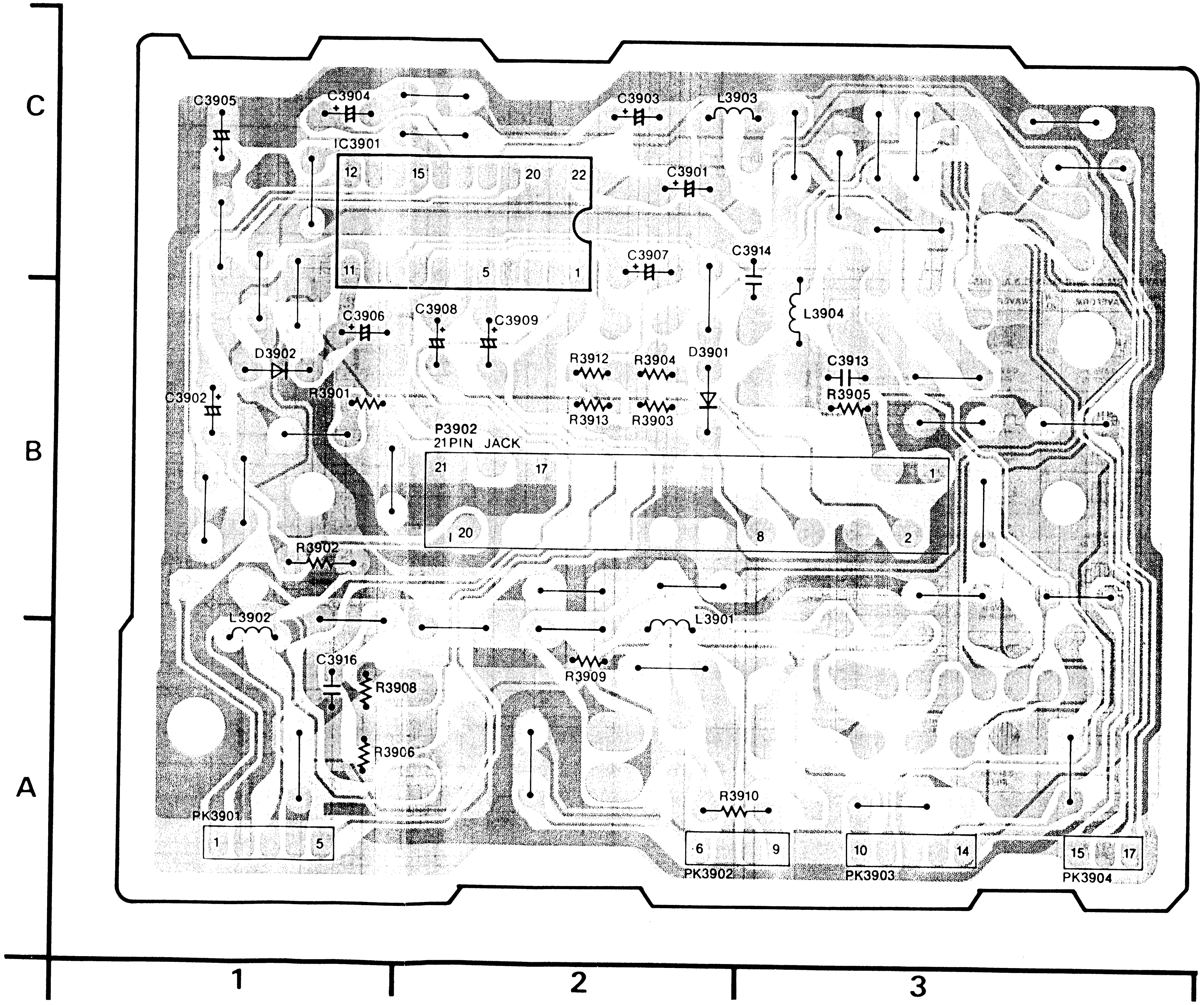
EMATIC DIAGRAM FOR
TO PARTS LIST.

6

3-12. INPUT/OUTPUT PACK C.B.A. (VEP03594A)

INPUT/OUTPUT PACK C.B.A.	
Integrated Circuit	
IC3901	C-1
Connector	
P3902	B-2
PK3901	A-1
PK3902	A-2
PK3903	A-3
PK3904	A-3

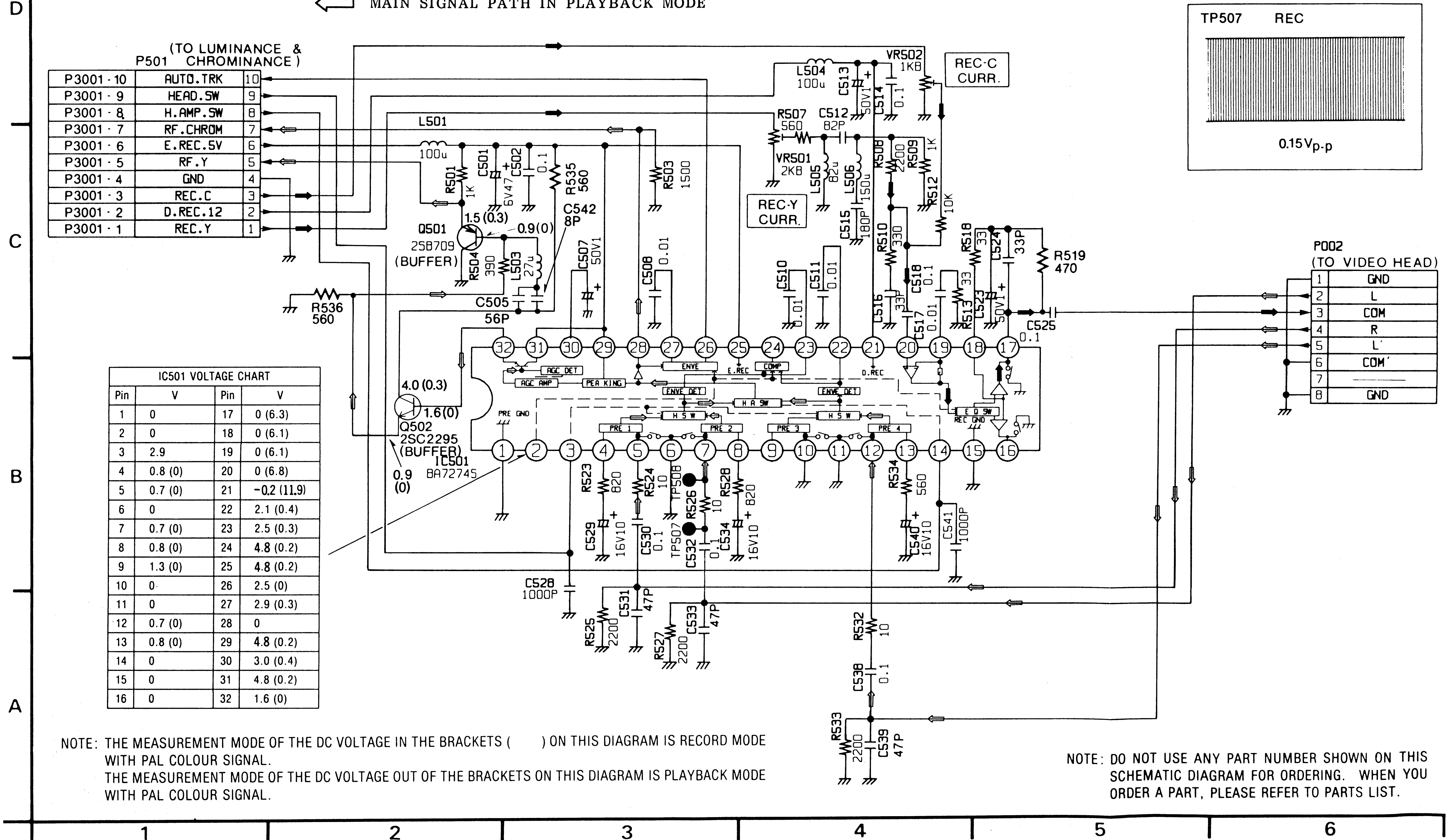
ADDRESS INFORMATION


C
B
A
1
2
3
C3905
C3904
IC3901
12
15
20
22
11
5
1
C3903
L3903
C3901
C3907
C3914
L3904
C3906
C3908
C3909
D3902
R3912
R3904
D3901
C3913
R3905
C3902
R3901
R3913
R3903
P3902
21PIN JACK
21
17
1
20
8
2
R3902
L3902
L3901
C3916
R3908
R3909
R3906
R3910
PK3901
1
5
6
9
PK3902
10
14
PK3903
15
17
PK3904

3-13. HEAD AMP SCHEMATIC DIAGRAM

⬅ MAIN SIGNAL PATH IN REC MODE

⇦ MAIN SIGNAL PATH IN PLAYBACK MODE


D
C
B
A
1
2
3
4
5
6
(TO LUMINANCE & CHROMINANCE)
P501
P3001 · 10 AUTO.TRK 10
P3001 · 9 HEAD.SW 9
P3001 · 8 H.AMP.SW 8
P3001 · 7 RF.CHROM 7
P3001 · 6 E.REC.5V 6
P3001 · 5 RF.Y 5
P3001 · 4 GND 4
P3001 · 3 REC.C 3
P3001 · 2 D.REC.12 2
P3001 · 1 REC.Y 1
L501
100u
R501 1K
C501 6V47
C502 0.1
R535 560
C542 8P
1.5 (0.3)
0.9(0)
Q501 2SB709 (BUFFER)
R504 390
L503 27u
C505 56P
C507 50V1
R536 560
R503 1500
C508 0.01
4.0 (0.3)
1.6(0)
Q502 2SC2295 (BUFFER)
0.9 (0)
IC501 BA7274S
L504 100u
C513 50V1
C514 0.1
VR502 1KB
REC·C CURR.
R507 560
C512 82P
VR501 2KB
L505 82u
L506 150u
R508 2200
R509 1K
R512 10K
REC·Y CURR.
C515 180P
R510 330
C510 0.01
C511 0.01
C516 33P
C518 0.1
C517 0.01
R513 33
R518 33
C524 33P
C523 50V1
R519 470
C525 0.1
AGC DET
AGC AMP
PEA KING
ENVE
E.REC
COMP
D.REC
ENVE DET
H A SW
H S W
PRE GND
PRE 1
PRE 2
PRE 3
PRE 4
E Q SW
REC GND
R523 820
C529 16V10
R524 10
C530 0.1
TP508
R526 10
TP507
C532 0.1
C534 16V10
R528 820
R534 560
C540 16V10
C541 1000P
C528 1000P
R525 2200
C531 47P
R527 2200
C533 47P
R532 10
C538 0.1
R533 2200
C539 47P
P002 (TO VIDEO HEAD)
1 GND
2 L
3 COM
4 R
5 L'
6 COM'
7 ———
8 GND
TP507 REC
0.15Vp-p

IC501 VOLTAGE CHART			
Pin	V	Pin	V
1	0	17	0 (6.3)
2	0	18	0 (6.1)
3	2.9	19	0 (6.1)
4	0.8 (0)	20	0 (6.8)
5	0.7 (0)	21	-0.2 (11.9)
6	0	22	2.1 (0.4)
7	0.7 (0)	23	2.5 (0.3)
8	0.8 (0)	24	4.8 (0.2)
9	1.3 (0)	25	4.8 (0.2)
10	0	26	2.5 (0)
11	0	27	2.9 (0.3)
12	0.7 (0)	28	0
13	0.8 (0)	29	4.8 (0.2)
14	0	30	3.0 (0.4)
15	0	31	4.8 (0.2)
16	0	32	1.6 (0)

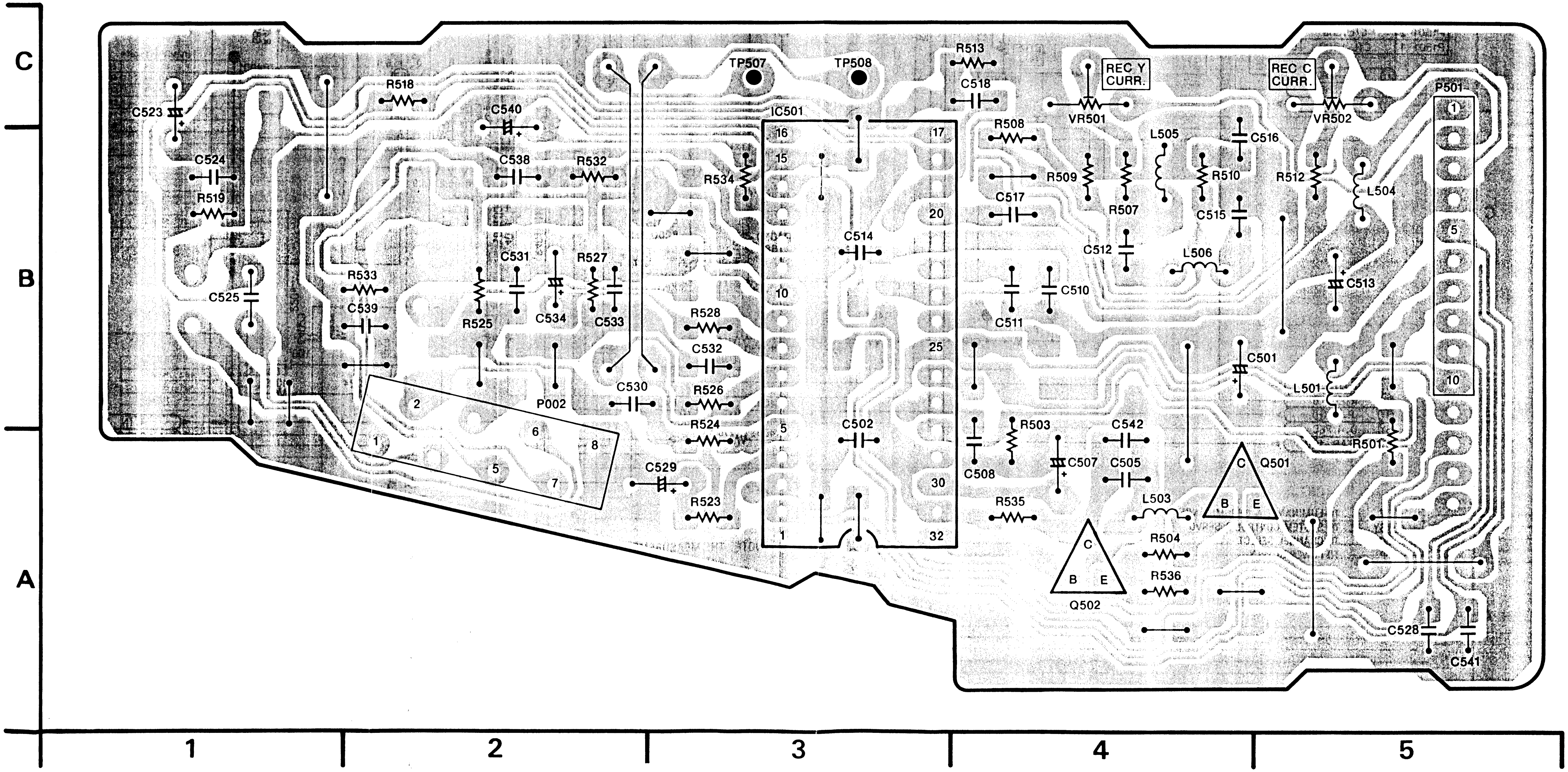
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-14. HEAD AMP C.B.A. (VEP05137B)

HEAD AMP C.B.A.			
Transistor		Adjustment	
Q501	A-5	VR501	C-4
Q502	A-4	VR502	C-5
Integrated Circuit		Connector	
IC501	C-3	P002	B-2
Test Point		P501	C-5
TP507	C-3		
TP508	C-3		

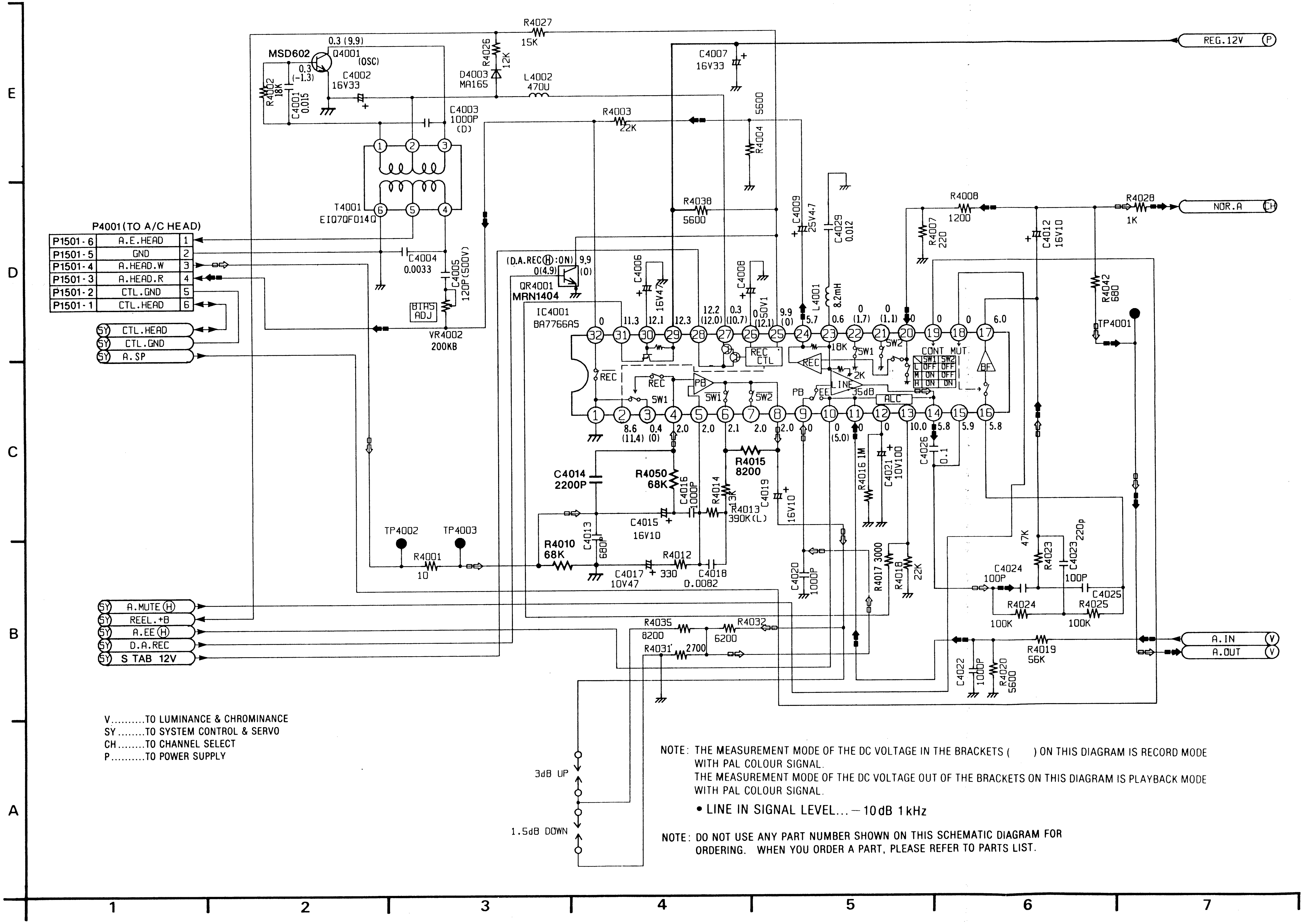
ADDRESS INFORMATION


C
B
A
1
2
3
4
5
C523
C524
R519
C525
R518
C540
C538
R532
R534
R533
C539
C531
R527
R525
C534
C533
P002
2
1
6
5
7
8
C530
C529
R528
C532
R526
R524
R523
TP507
TP508
IC501
16
15
10
5
1
17
20
25
30
32
C514
C502
R513
C518
R508
R509
R507
C517
C512
C511
C510
REC Y CURR.
VR501
L505
C516
R510
C515
L506
REC C CURR.
VR502
R512
L504
C513
P501
1
5
10
C501
L501
R501
C
Q501
B
E
R503
C542
C508
C507
C505
R535
L503
R504
R536
C
B
E
Q502
C528
C541

3-15. AUDIO SCHEMATIC DIAGRAM

◀■ MAIN SIGNAL PATH IN REC MODE

⇦□ MAIN SIGNAL PATH IN PLAYBACK MODE



MSD602
Q4001 (OSC)
0.3 (9.9)
0.3 (-1.3)
R4002 18K
C4001 0.015
C4002 16V33
C4003 1000P (D)
R4026 12K
D4003 MA165
R4027 15K
L4002 470U
C4007 16V33
R4003 22K
R4004 5600
R4038 5600
C4009 25V4.7
C4029 0.012
L4001 8.2mH
R4008 1200
R4007 220
C4012 16V10
R4028 1K
R4042 680
TP4001
REG.12V (P)
NOR.A (CH)
A.IN (V)
A.OUT (V)
T4001 EI07QF014Q
C4004 0.0033
C4005 120P (500V)
BIAS ADJ
VR4002 200KB
P4001 (TO A/C HEAD)
P1501-6 A.E.HEAD 1
P1501-5 GND 2
P1501-4 A.HEAD.W 3
P1501-3 A.HEAD.R 4
P1501-2 CTL.GND 5
P1501-1 CTL.HEAD 6
SY CTL.HEAD
SY CTL.GND
SY A.SP
(D.A.REC Ⓗ:ON) 9.9
0 (4.9) (0)
QR4001 MRN1404
IC4001 BA7766AS
C4006 16V47
C4008 50V1
REC CTL
REC
PB
SW1
SW2
LINE 35dB
ALC
18K
2K
CONT MUT
SW1 SW2
L OFF OFF
M ON OFF
H ON ON
BF
11.3 12.1 12.3 12.2 (12.0) 0.3 (10.7) (12.1) 9.9 (0) 5.7 0.6 0 (1.7) 0 (1.1) 0 0 0 6.0
8.6 (11.4) 0.4 (0) 2.0 2.0 2.1 2.0 2.0 0 0 (5.0) 0 0 10.0 5.8 5.9 5.8
C4014 2200P
R4050 68K
C4016 1000P
R4014 13K
R4015 8200
C4019 16V10
R4013 390K (L)
C4015 16V10
R4010 68K
C4013 680P
R4012 330
C4017 10V47
C4018 0.0082
TP4002
TP4003
R4001 10
R4016 1M
C4021 10V100
C4026 0.1
C4020 1000P
R4017 3000
R4018 22K
C4024 100P
R4023 47K
C4023 220p
C4025 100P
R4024 100K
R4025 100K
R4019 56K
C4022 100P
R4020 5600
R4035 8200
R4032 6200
R4031 2700
SY A.MUTE Ⓗ
SY REEL.+B
SY A.EE Ⓗ
SY D.A.REC
SY S TAB 12V
3dB UP
1.5dB DOWN
E
D
C
B
A
1
2
3
4
5
6
7

V..........TO LUMINANCE & CHROMINANCE
SY........TO SYSTEM CONTROL & SERVO
CH........TO CHANNEL SELECT
P..........TO POWER SUPPLY

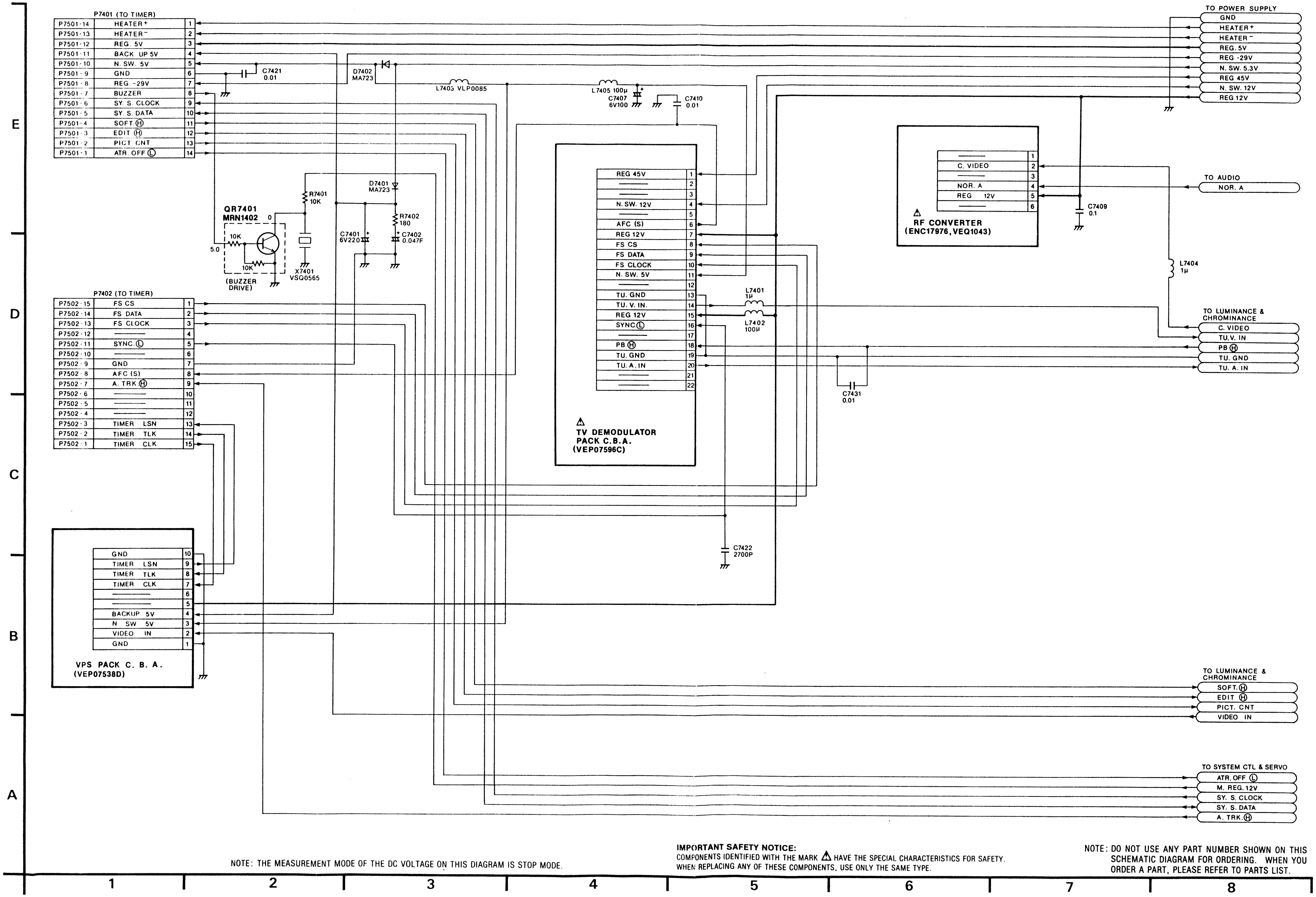
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

- LINE IN SIGNAL LEVEL... −10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
HEAD AMP Section

3-16. CHANNEL SELECT SCHEMATIC DIAGRAM



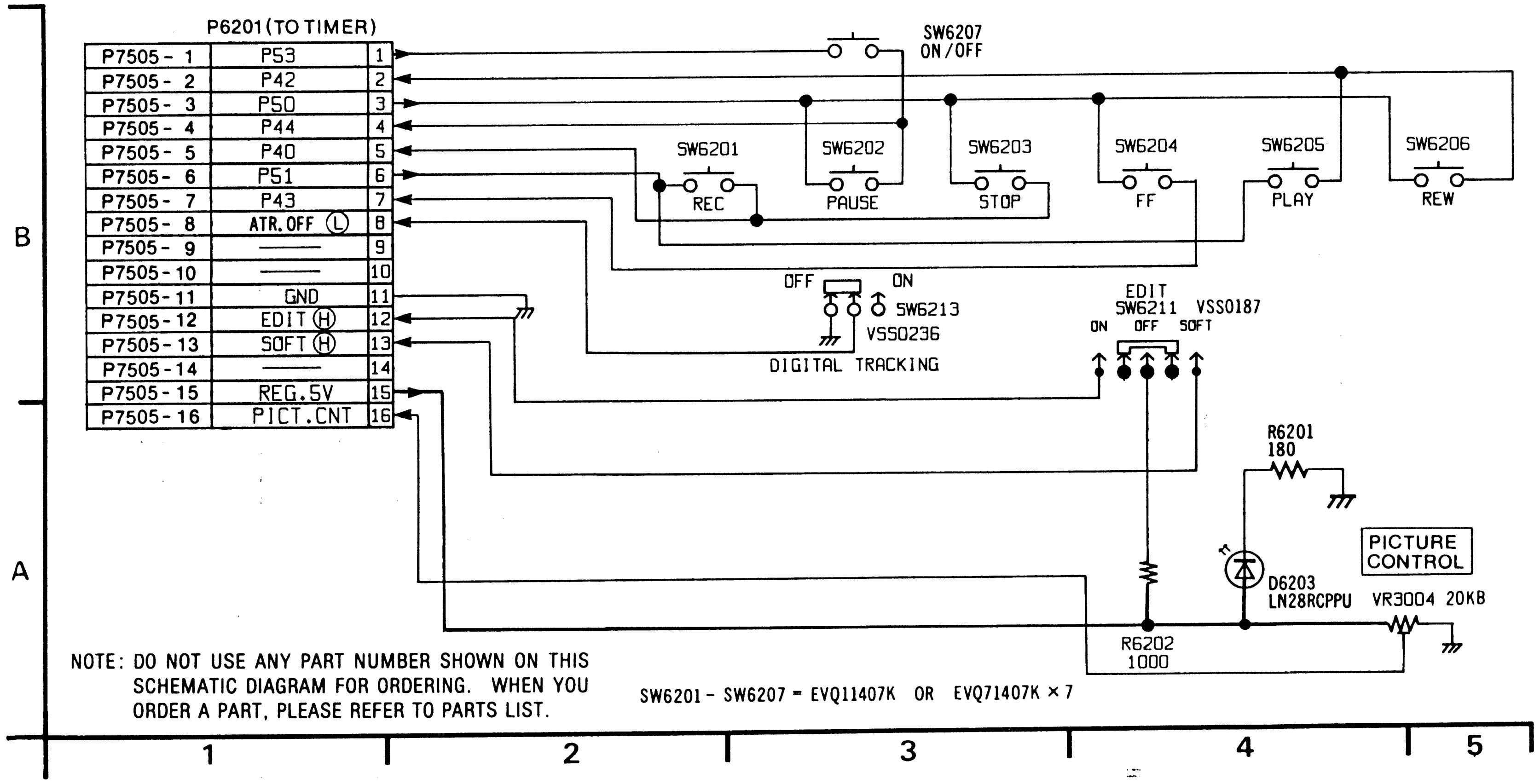
P7401 (TO TIMER)
P7501-14 HEATER+ 1
P7501-13 HEATER− 2
P7501-12 REG. 5V 3
P7501-11 BACK UP 5V 4
P7501-10 N. SW. 5V 5
P7501-9 GND 6
P7501-8 REG −29V 7
P7501-7 BUZZER 8
P7501-6 SY. S. CLOCK 9
P7501-5 SY. S. DATA 10
P7501-4 SOFT Ⓗ 11
P7501-3 EDIT Ⓗ 12
P7501-2 PICT CNT 13
P7501-1 ATR. OFF Ⓛ 14
C7421 0.01
D7402 MA723
L7403 VLP0085
L7405 100μ
C7407 6V100
C7410 0.01
R7401 10K
D7401 MA723
R7402 180
C7401 6V220
C7402 0.047F
QR7401 MRN1402
0
5.0
10K
10K
(BUZZER DRIVE)
X7401 VSQ0565
TV DEMODULATOR PACK C.B.A. (VEP07596C)
REG 45V 1
2
3
N. SW. 12V 4
5
AFC (S) 6
REG 12V 7
FS CS 8
FS DATA 9
FS CLOCK 10
N. SW. 5V 11
12
TU. GND 13
TU. V. IN. 14
REG 12V 15
SYNC Ⓛ 16
17
PB Ⓗ 18
TU. GND 19
TU. A. IN 20
21
22
L7401 1μ
L7402 100μ
C7431 0.01
C7422 2700P
RF CONVERTER (ENC17976, VEQ1043)
1
C. VIDEO 2
3
NOR. A 4
REG 12V 5
6
C7409 0.1
L7404 1μ
TO POWER SUPPLY
GND
HEATER+
HEATER−
REG. 5V
REG −29V
N. SW. 5.3V
REG 45V
N. SW. 12V
REG 12V
TO AUDIO
NOR. A
TO LUMINANCE & CHROMINANCE
C. VIDEO
TU. V. IN
PB Ⓗ
TU. GND
TU. A. IN
P7402 (TO TIMER)
P7502-15 FS CS 1
P7502-14 FS DATA 2
P7502-13 FS CLOCK 3
P7502-12 4
P7502-11 SYNC Ⓛ 5
P7502-10 6
P7502-9 GND 7
P7502-8 AFC (S) 8
P7502-7 A. TRK Ⓗ 9
P7502-6 10
P7502-5 11
P7502-4 12
P7502-3 TIMER LSN 13
P7502-2 TIMER TLK 14
P7502-1 TIMER CLK 15
VPS PACK C. B. A. (VEP07538D)
GND 10
TIMER LSN 9
TIMER TLK 8
TIMER CLK 7
6
5
BACKUP 5V 4
N SW 5V 3
VIDEO IN 2
GND 1
TO LUMINANCE & CHROMINANCE
SOFT Ⓗ
EDIT Ⓗ
PICT. CNT
VIDEO IN
TO SYSTEM CTL & SERVO
ATR. OFF Ⓛ
M. REG. 12V
SY. S. CLOCK
SY. S. DATA
A. TRK. Ⓗ
E
D
C
B
A
1
2
3
4
5
6
7
8

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

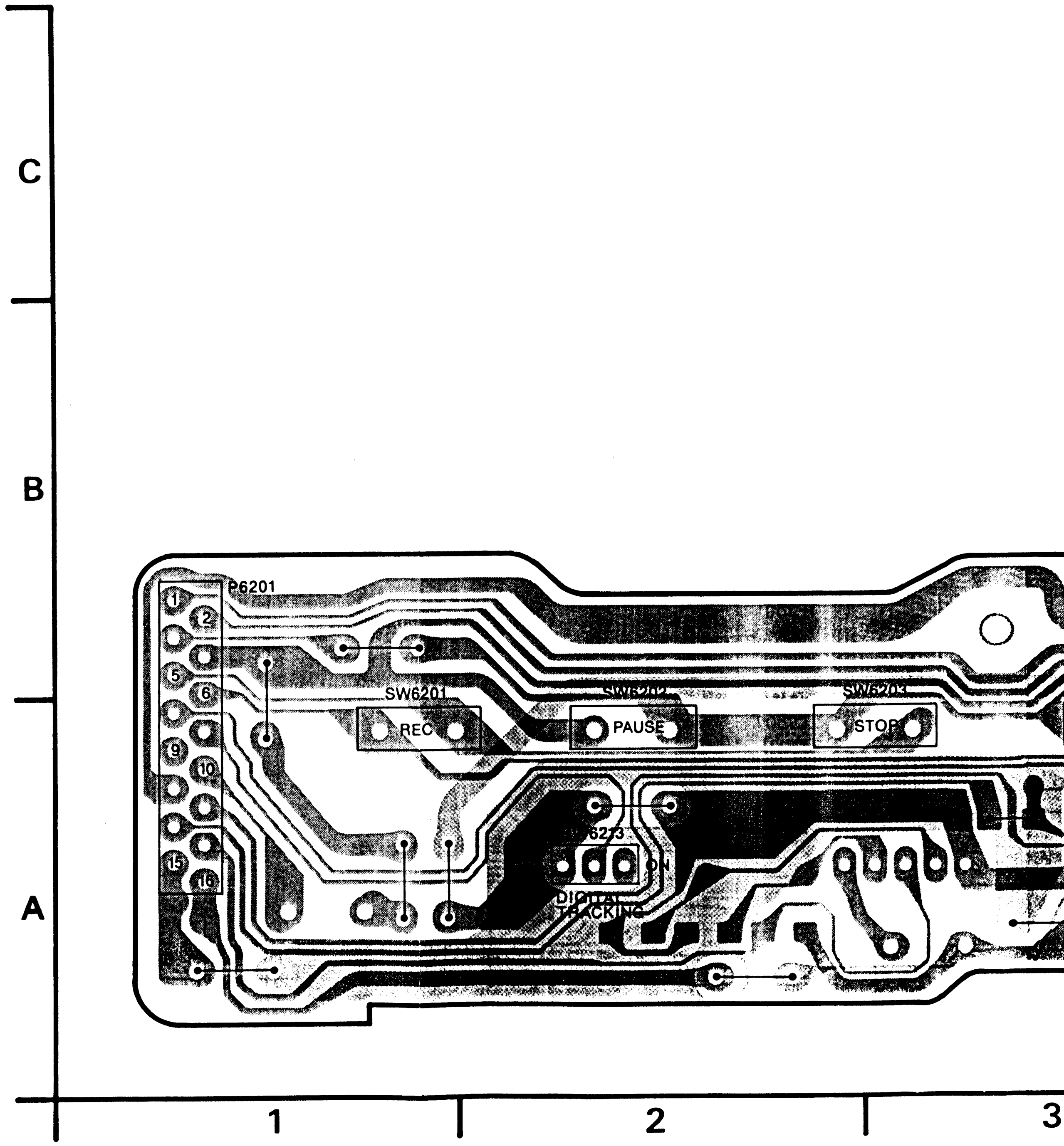
3-17. OPERATION SCHEMATIC DIAGRAM


P6201 (TO TIMER)
P7505 - 1 P53 1
P7505 - 2 P42 2
P7505 - 3 P50 3
P7505 - 4 P44 4
P7505 - 5 P40 5
P7505 - 6 P51 6
P7505 - 7 P43 7
P7505 - 8 ATR. OFF Ⓛ 8
P7505 - 9 ——— 9
P7505 - 10 ——— 10
P7505 - 11 GND 11
P7505 - 12 EDIT Ⓗ 12
P7505 - 13 SOFT Ⓗ 13
P7505 - 14 ——— 14
P7505 - 15 REG. 5V 15
P7505 - 16 PICT. CNT 16
SW6207
ON/OFF
SW6201
REC
SW6202
PAUSE
SW6203
STOP
SW6204
FF
SW6205
PLAY
SW6206
REW
OFF
ON
SW6213
VSS0236
DIGITAL TRACKING
EDIT
SW6211 VSS0187
ON OFF SOFT
R6201
180
PICTURE CONTROL
D6203
LN28RCPPU
VR3004 20KB
R6202
1000
A
B
1
2
3
4
5

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SW6201 - SW6207 = EVQ11407K OR EVQ71407K × 7

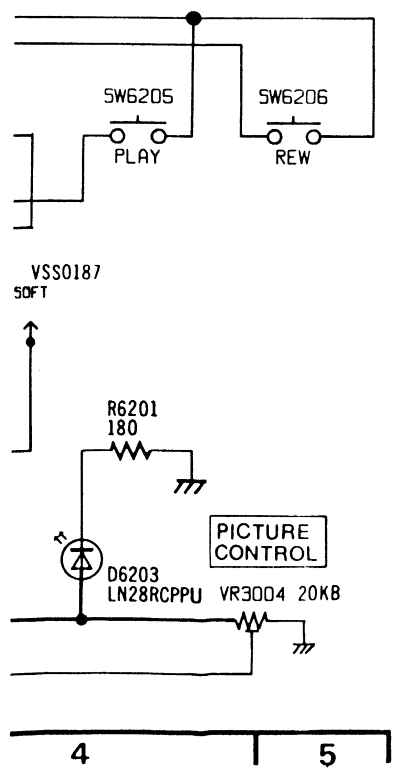
3-18. OPERATION C.B.A. (VEP06680A)

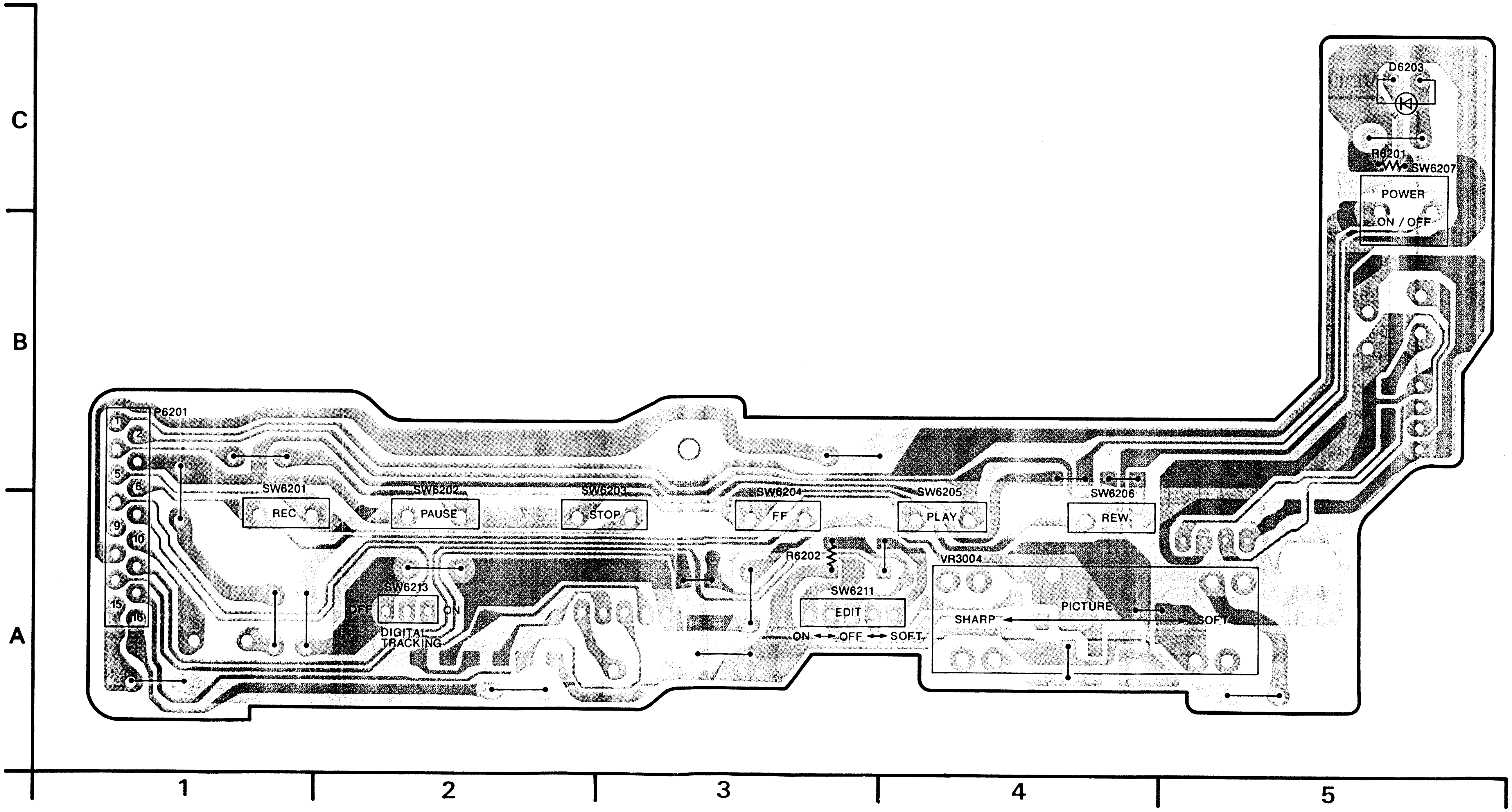

C
B
A
1
2
3
P6201
1
2
5
6
9
10
15
16
SW6201
REC
PAUSE
STOP
DIGITAL TRACKING
ON

3-18. OPERATION C.B.A. (VEP06680A)

OPERATION C.B.A.	
Adjustment	
VR3004	A-4
Connector	
P6201	B-1

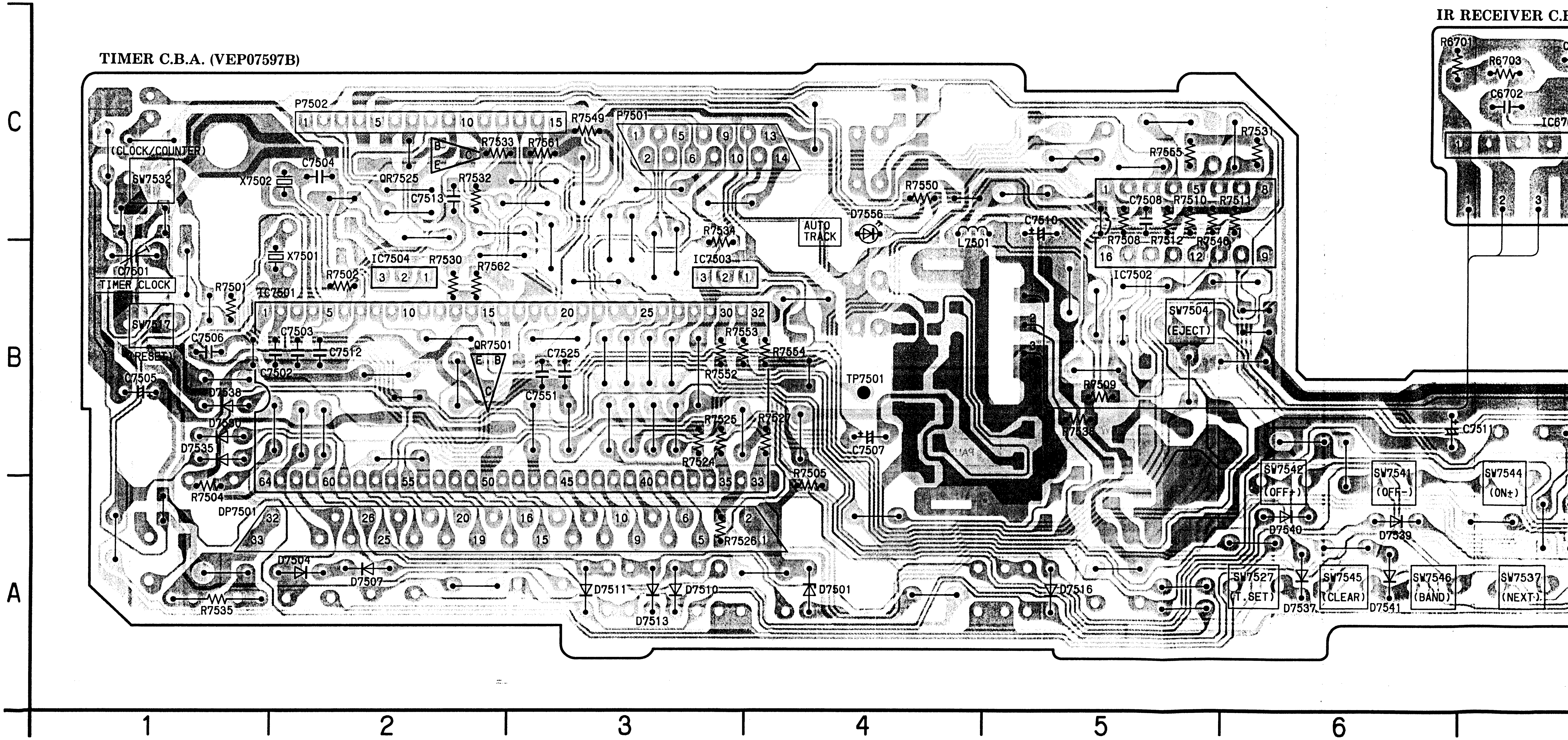
ADDRESS INFORMATION


SW6205
PLAY
SW6206
REW
VSS0187
SOFT
R6201
180
PICTURE CONTROL
D6203
LN28RCPPU
VR3004 20KB
4
5


C
B
A
1
2
3
4
5
P6201
1
2
5
6
9
10
15
16
SW6201
REC
SW6202
PAUSE
SW6203
STOP
SW6204
FF
SW6205
PLAY
SW6206
REW
SW6213
OFF
ON
DIGITAL TRACKING
R6202
SW6211
EDIT
ON ↔ OFF ↔ SOFT
VR3004
PICTURE
SHARP
SOFT
D6203
R6201
SW6207
POWER
ON / OFF

Back Page:
TIMER Section

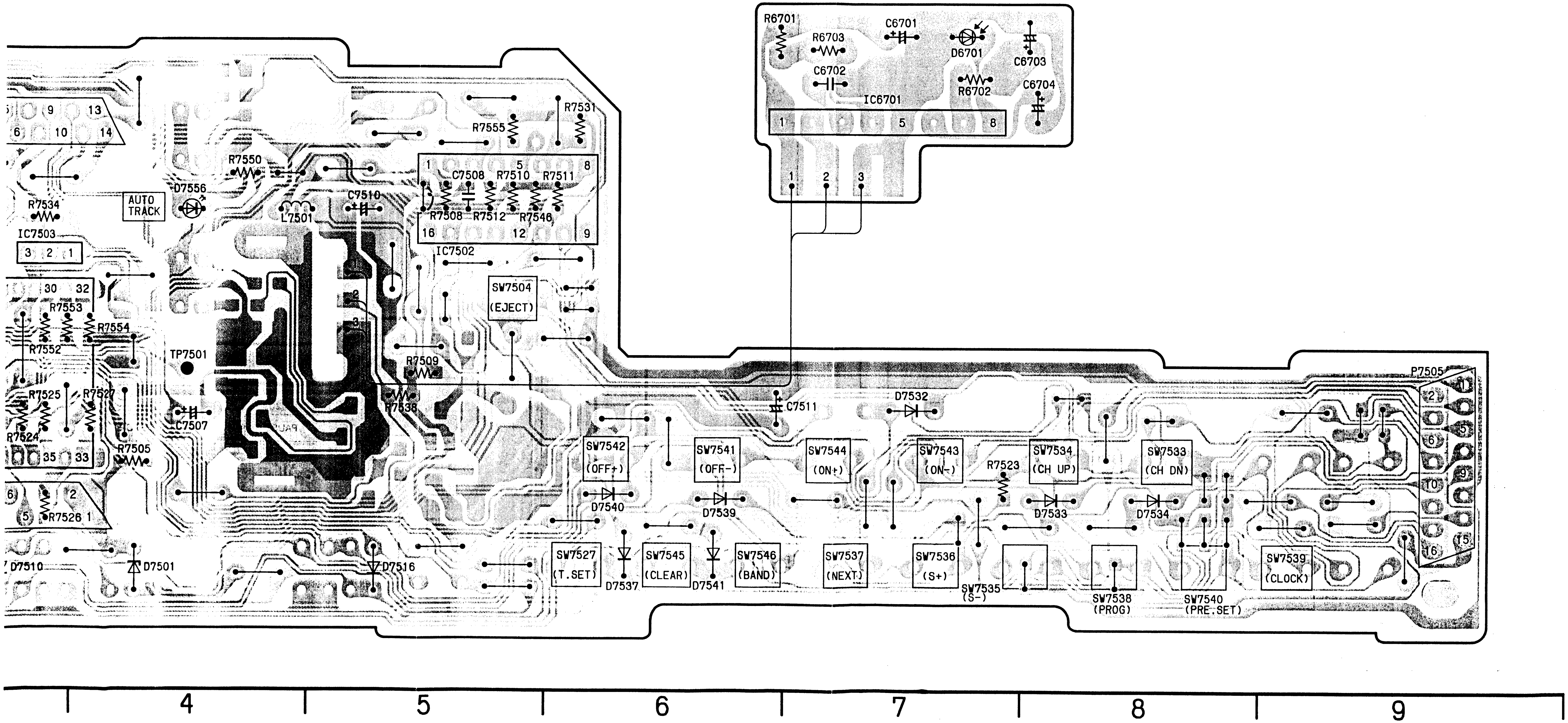
3-19. TIMER C.B.A. (VEP07597B)


TIMER C.B.A. (VEP07597B)
IR RECEIVER C.B
C
B
A
1
2
3
4
5
6
P7502
P7501
R7549
R7533
R7561
QR7525
C7504
X7502
C7513
R7532
(CLOCK/COUNTER)
SW7532
X7501
IC7504
R7530
R7562
R7502
C7501
TIMER CLOCK
R7501
IC7501
SW7517
(RESET)
C7506
C7503
C7512
C7502
QR7501
C7525
C7551
C7505
D7538
D7536
D7535
R7504
DP7501
R7535
D7504
D7507
D7511
D7513
D7510
D7501
D7516
R7534
IC7503
AUTO TRACK
D7556
R7550
L7501
C7510
R7553
R7554
R7552
R7526
R7527
R7524
R7505
R7526
TP7501
C7507
R7555
R7531
C7508
R7510
R7511
R7508
R7512
R7540
IC7502
SW7504
(EJECT)
R7509
R7538
C7511
SW7542
(OFF+)
D7540
SW7541
(OFF-)
D7539
SW7544
(ON±)
SW7527
(T.SET)
D7537
SW7545
(CLEAR)
D7541
SW7546
(BAND)
SW7537
(NEXT)
R6701
R6703
C6702
IC67

TIMER C.B.A.	
Transistor & Resistor	
QR7501	B-2
QR7525	C-2
Integrated Circuit	
IC6701	C-7
IC7501	B-2
IC7502	B-5
IC7503	B-3
IC7504	B-2
Test Point	
TP7501	B-4
Adjustment	
C7501	B-1
Connector	
P7501	C-3
P7502	C-2
P7505	B-9

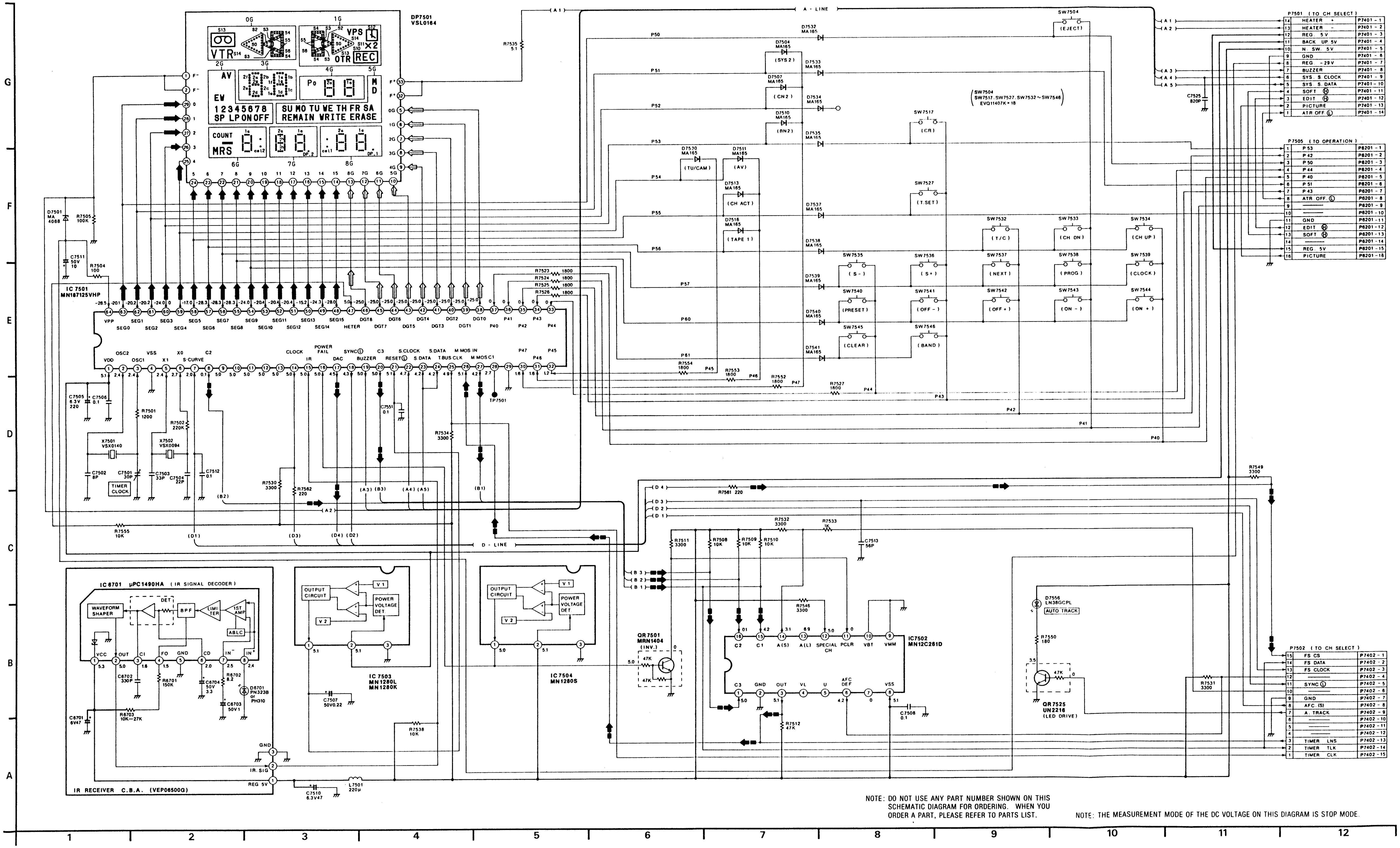
ADDRESS INFORMATION

IR RECEIVER C.B.A. (VEP06500G)


R6701
R6703
C6701
D6701
C6703
C6702
R6702
C6704
IC6701
1
5
8
1
2
3
R7531
R7555
R7550
D7556
AUTO TRACK
R7534
IC7503
3 2 1
C7510
L7501
C7508
R7510
R7511
R7508
R7512
R7546
1
5
8
16
12
9
IC7502
SW7504 (EJECT)
R7553
R7554
R7552
TP7501
R7509
R7525
R7527
R7538
R7524
C7507
R7505
R7526
D7501
D7510
D7516
C7511
D7532
SW7542 (OFF+)
SW7541 (OFF-)
SW7544 (ON+)
SW7543 (ON-)
R7523
SW7534 (CH UP)
SW7533 (CH DN)
D7540
D7539
D7533
D7534
SW7527 (T.SET)
D7537
SW7545 (CLEAR)
D7541
SW7546 (BAND)
SW7537 (NEXT)
SW7536 (S+)
SW7535 (S-)
SW7538 (PROG)
SW7540 (PRE.SET)
SW7539 (CLOCK)
P7505
4
5
6
7
8
9

3-20. TIMER SCHEMATIC DIAGRAM

SEGMENT CONTROL SIGNAL   GRID CONTROL SIGNAL   TUNE CONTROL SIGNAL


DP7501
VSL0164
IC 7501
MN187125VHP
IC6701 μPC1490HA (IR SIGNAL DECODER)
WAVEFORM SHAPER
DET
BPF
LIMITER
1ST AMP
ABLC
IR RECEIVER C.B.A. (VEP06500G)
GND
IR. SIG
REG 5V
IC 7503
MN1280L
MN1280K
IC 7504
MN1280S
OUTPUT CIRCUIT
POWER VOLTAGE DET
QR7501
MRN1404
(INV.)
IC7502
MN12C281D
QR7525
UN2216
(LED DRIVE)
D7556
LN38GCPL
AUTO TRACK
TIMER CLOCK
A - LINE
D - LINE
SW7504
(EJECT)
SW7504
SW7517, SW7527, SW7532 ~ SW7546
EVQ11407K × 18
SW7517 (CH)
SW7527 (T.SET)
SW7532 (T/C)
SW7533 (CH DN)
SW7534 (CH UP)
SW7535 (S-)
SW7536 (S+)
SW7537 (NEXT)
SW7538 (PROG)
SW7539 (CLOCK)
SW7540 (PRESET)
SW7541 (OFF-)
SW7542 (OFF+)
SW7543 (ON-)
SW7544 (ON+)
SW7545 (CLEAR)
SW7546 (BAND)
P7501 (TO CH SELECT)
14 HEATER + P7401 - 1
13 HEATER - P7401 - 2
12 REG. 5V P7401 - 3
11 BACK UP. 5V P7401 - 4
10 N. SW. 5V P7401 - 5
9 GND P7401 - 6
8 REG. -29V P7401 - 7
7 BUZZER P7401 - 8
6 SYS. S. CLOCK P7401 - 9
5 SYS. S. DATA P7401 - 10
4 SOFT Ⓗ P7401 - 11
3 EDIT Ⓗ P7401 - 12
2 PICTURE P7401 - 13
1 ATR.OFF Ⓛ P7401 - 14
P7505 (TO OPERATION)
1 P 53 P6201 - 1
2 P 42 P6201 - 2
3 P 50 P6201 - 3
4 P 44 P6201 - 4
5 P 40 P6201 - 5
6 P 51 P6201 - 6
7 P 43 P6201 - 7
8 ATR. OFF. Ⓛ P6201 - 8
9 P6201 - 9
10 P6201 - 10
11 GND P6201 - 11
12 EDIT Ⓗ P6201 - 12
13 SOFT Ⓗ P6201 - 13
14 P6201 - 14
15 REG. 5V P6201 - 15
16 PICTURE P6201 - 16
P7502 (TO CH SELECT)
15 FS CS P7402 - 1
14 FS DATA P7402 - 2
13 FS CLOCK P7402 - 3
12 P7402 - 4
11 SYNC Ⓛ P7402 - 5
10 P7402 - 6
9 GND P7402 - 7
8 AFC. (S) P7402 - 8
7 A. TRACK P7402 - 9
6 P7402 - 10
5 P7402 - 11
4 P7402 - 12
3 TIMER LNS P7402 - 13
2 TIMER TLK P7402 - 14
1 TIMER CLK P7402 - 15
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

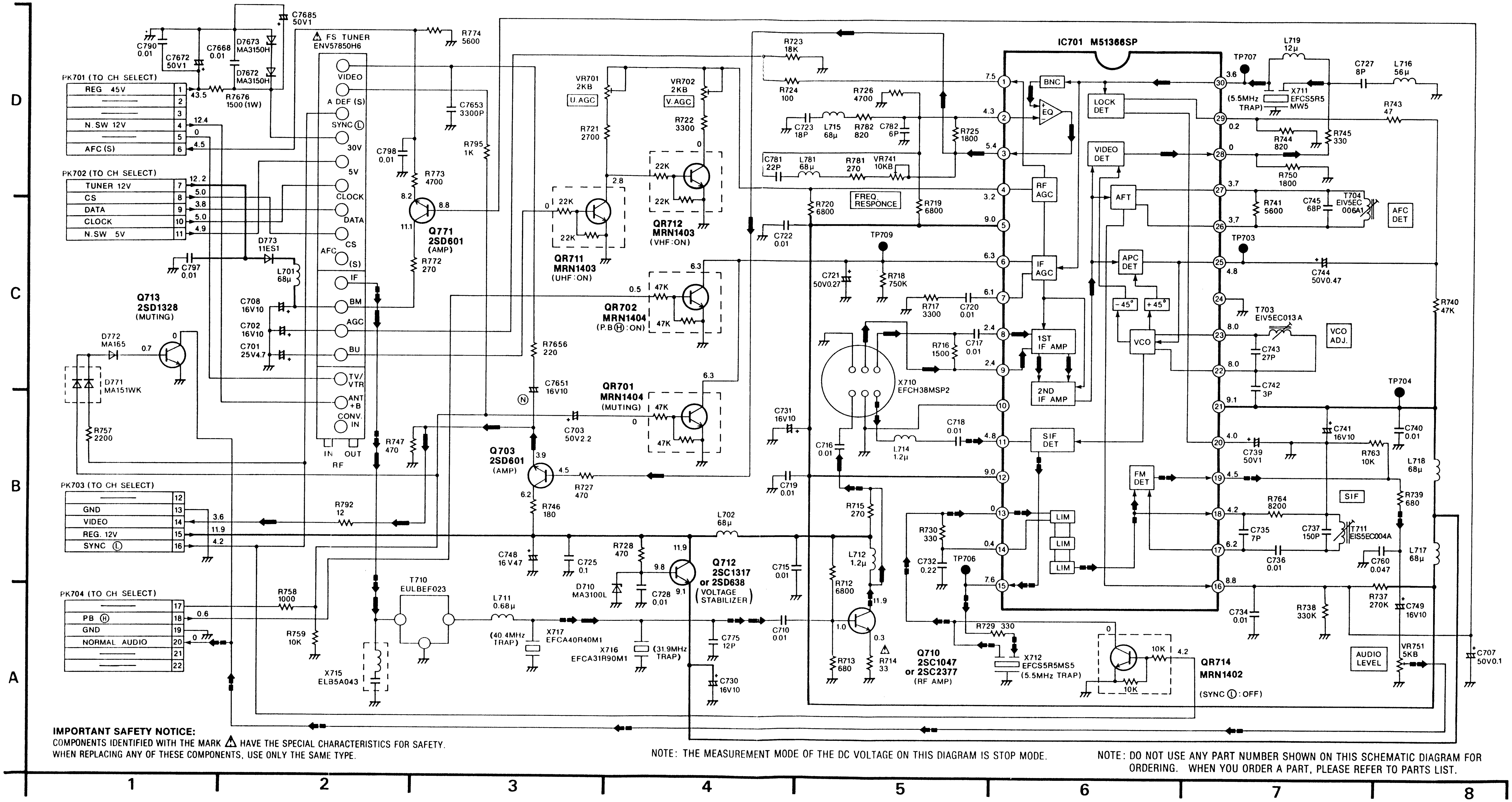
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

3-21. TV DEMODULATOR PACK SCHEMATIC DIAGRAM

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH


D
C
B
A
1
2
3
4
5
6
7
8
PK701 (TO CH SELECT)
REG 45V
N.SW 12V
AFC (S)
PK702 (TO CH SELECT)
TUNER 12V
CS
DATA
CLOCK
N.SW 5V
PK703 (TO CH SELECT)
GND
VIDEO
REG. 12V
SYNC Ⓛ
PK704 (TO CH SELECT)
PB Ⓗ
GND
NORMAL AUDIO
C790 0.01
C7672 50V1
C7668 0.01
C7685 50V1
D7673 MA3150H
D7672 MA3150H
R7676 1500 (1W)
△ FS TUNER ENV57850H6
VIDEO
A DEF (S)
SYNC Ⓛ
30V
5V
CLOCK
DATA
CS
AFC (S)
IF
BM
AGC
BU
TV/VTR
ANT +B
CONV. IN
IN OUT RF
R774 5600
C7653 3300P
R795 1K
C798 0.01
R773 4700
Q771 2SD601 (AMP)
R772 270
D773 11ES1
L701 68μ
C797 0.01
C708 16V10
C702 16V10
C701 25V4.7
Q713 2SD1328 (MUTING)
D772 MA165
D771 MA151WK
R757 2200
VR701 2KB U.AGC
VR702 2KB V.AGC
R721 2700
R722 3300
QR711 MRN1403 (UHF:ON)
QR712 MRN1403 (VHF:ON)
QR702 MRN1404 (P.BⒽ:ON)
QR701 MRN1404 (MUTING)
R7656 220
C7651 16V10
C703 50V2.2
R747 470
Q703 2SD601 (AMP)
R727 470
R746 180
R792 12
R758 1000
R759 10K
T710 EULBEF023
X715 ELB5A043
L711 0.68μ
(40.4MHz TRAP)
X717 EFCA40R40M1
X716 EFCA31R90M1
(31.9MHz TRAP)
C748 16V47
C725 0.1
D710 MA3100L
R728 470
C728 0.01
Q712 2SC1317 or 2SD638 (VOLTAGE STABILIZER)
L702 68μ
C715 0.01
C775 12P
C710 0.01
C730 16V10
R723 18K
R724 100
R726 4700
C723 18P
L715 68μ
R782 820
C782 6P
R725 1800
C781 22P
L781 68μ
R781 270
VR741 10KB
R720 6800
FREQ. RESPONCE
R719 6800
C722 0.01
TP709
C721 50V0.27
R718 750K
R717 3300
C720 0.01
R716 1500
C717 0.01
X710 EFCH38MSP2
C731 16V10
C716 0.01
C718 0.01
L714 1.2μ
C719 0.01
R715 270
L712 1.2μ
R712 6800
Q710 2SC1047 or 2SC2377 (RF AMP)
R713 680
R714 33
R730 330
C732 0.22
TP706
R729 330
X712 EFCS5R5MS5 (5.5MHz TRAP)
QR714 MRN1402 (SYNC Ⓛ:OFF)
IC701 M51366SP
BNC
EQ
LOCK DET
VIDEO DET
RF AGC
AFT
IF AGC
APC DET
-45°
+45°
VCO
1ST IF AMP
2ND IF AMP
SIF DET
FM DET
LIM
TP707
L719 12μ
X711 EFCS5R5 MW5
(5.5MHz TRAP)
C727 8P
L716 56μ
R743 47
R744 820
R745 330
R750 1800
R741 5600
C745 68P
T704 EIV5EC 006A1
AFC DET
TP703
C744 50V0.47
R740 47K
T703 EIV5EC013A
VCO ADJ.
C743 27P
C742 3P
TP704
C741 16V10
C740 0.01
C739 50V1
R763 10K
L718 68μ
SIF
R764 8200
R739 680
C735 7P
C737 150P
T711 EIS5EC004A
C736 0.01
C760 0.047
L717 68μ
C734 0.01
R738 330K
R737 270K
C749 16V10
AUDIO LEVEL
VR751 5KB
C707 50V0.1

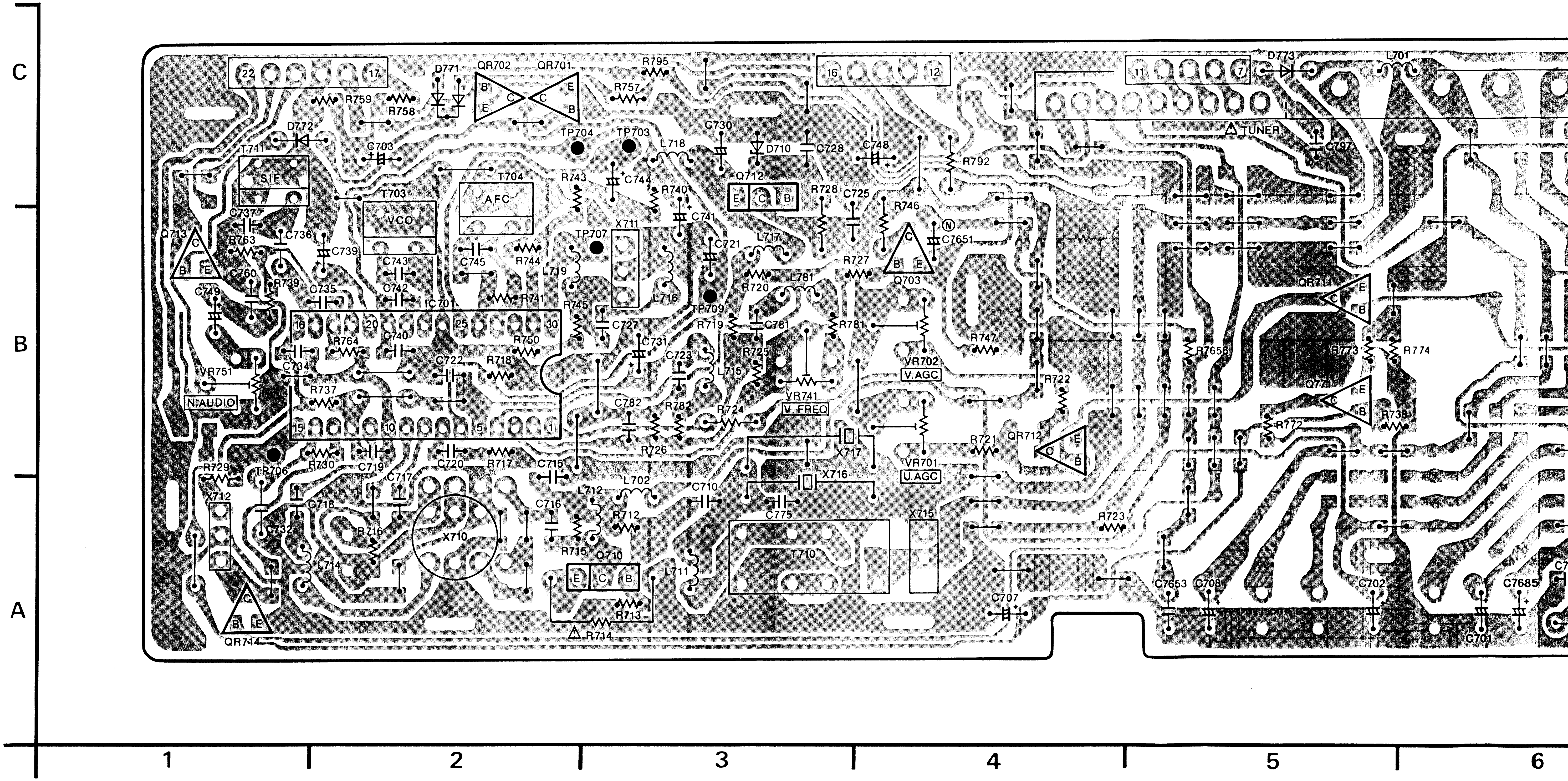
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK △ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

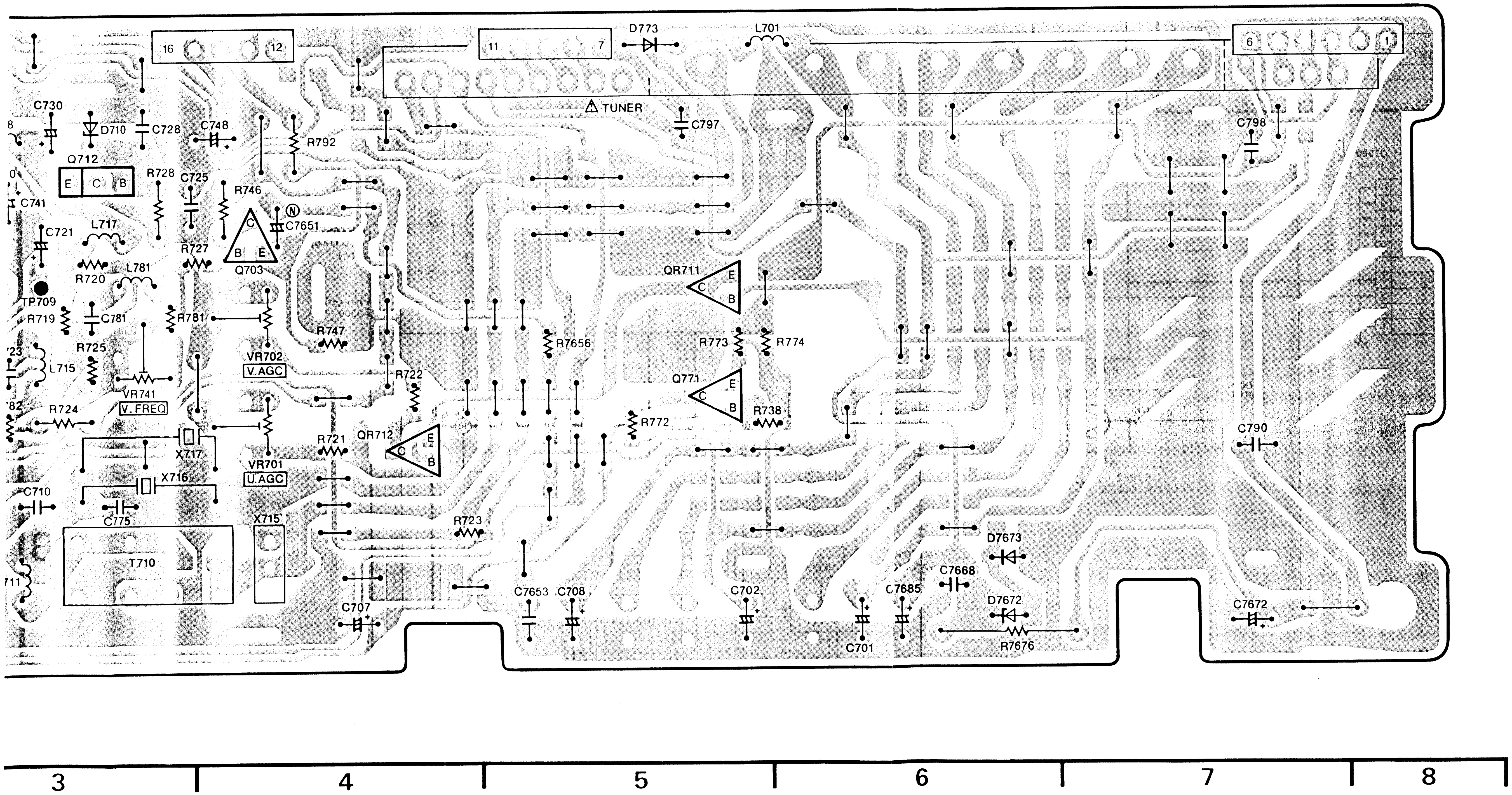
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

Back Page:
TIMER Section

3-22. TV DEMODULATOR PACK C.B.A. (VEP07596C)


C
B
A
1
2
3
4
5
6
22
17
16
12
11
7
D771
QR702
QR701
R795
R757
R759
R758
D772
C703
T711
SIF
T703
VCO
T704
AFC
TP704
TP703
L718
C730
D710
C728
C748
R792
D773
L701
TUNER
C797
Q713
C737
R763
C736
C739
C743
C745
R744
R743
C744
R740
C741
Q712
E
C
B
R728
C725
R746
C7651
TP707
X711
L719
L716
C721
L717
R720
L781
R727
Q703
C760
R739
C735
C742
R741
IC701
C749
R764
C740
R745
C727
TP709
R719
C781
R781
VR702
V.AGC
R747
QR711
VR751
N.AUDIO
C734
C722
R718
R750
C731
C723
L715
R725
VR741
V.FREQ
R7658
R773
R774
Q771
R737
C782
R782
R724
R722
R772
R738
R726
X717
VR701
U.AGC
R721
QR712
R729
TR706
R730
C719
C717
C720
R717
C715
X716
X712
C718
L712
L702
C710
C775
X715
R723
C732
R716
X710
C716
R712
L714
R715
Q710
L711
T710
C7653
C708
C702
C7685
C707
R713
R714
QR714
C701

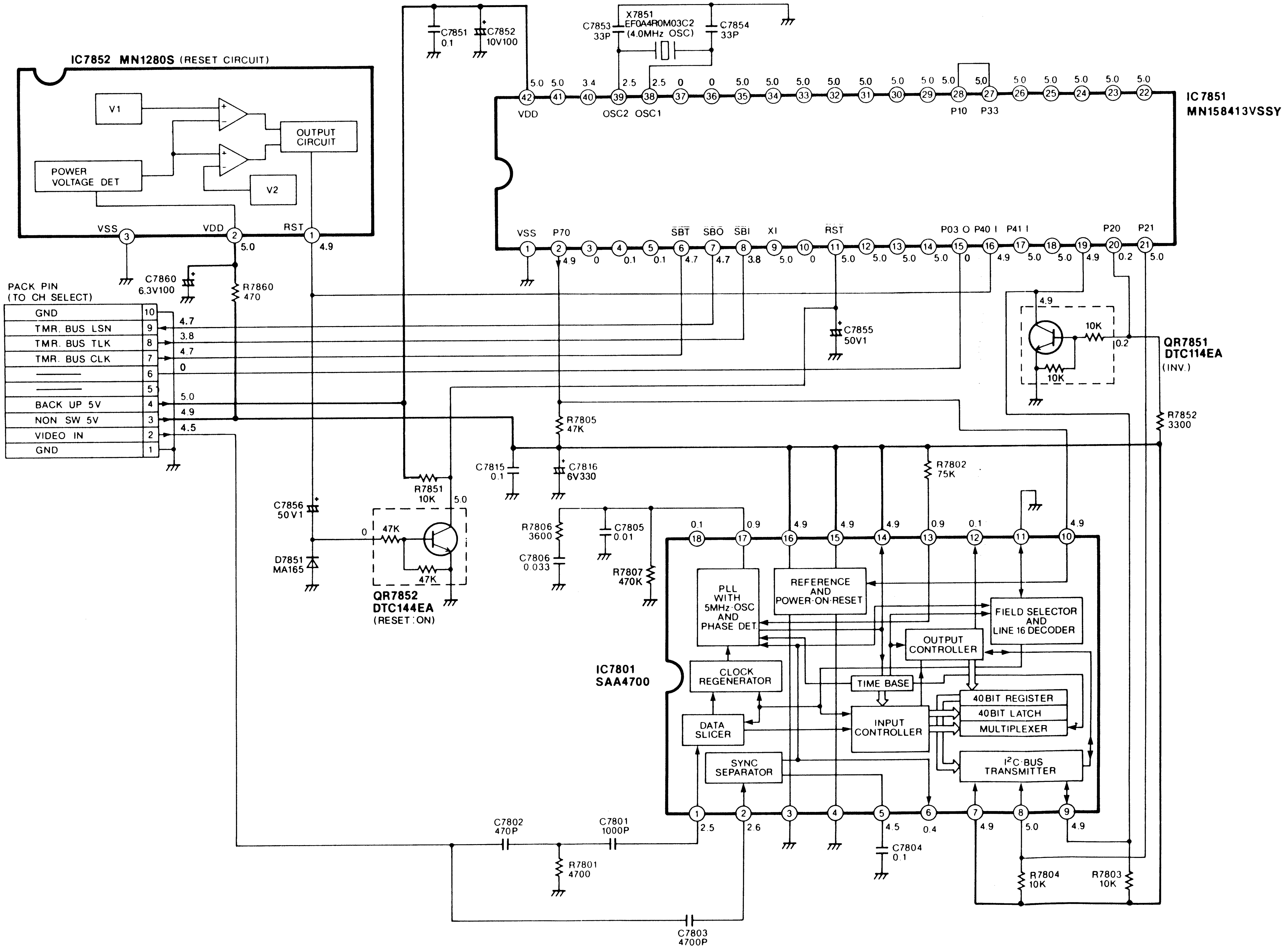

16
12
11
7
D773
L701
6
1
TUNER
C797
C798
C730
D710
C728
C748
R792
Q712
E
C
B
R728
C725
R746
C741
C7651
C721
L717
R727
Q703
R720
L781
QR711
TP709
R719
C781
R781
R747
R7656
R773
R774
R723
L715
R725
VR702
V.AGC
VR741
V.FREQ
R722
Q771
R724
R772
R738
R721
QR712
X717
VR701
U.AGC
C790
C710
X716
C775
X715
T710
D7673
C7668
C707
C7653
C708
C702
C7685
D7672
C7672
C701
R7676
3
4
5
6
7
8

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q703	B-4
Q710	A-3
Q712	C-3
Q713	B-1
Q771	B-5
Transistor & Resistor	
QR701	C-2
QR702	C-2
QR711	B-5
QR712	B-4
QR714	A-1
Integrated Circuit	
IC701	B-2
Test Point	
TP703	C-3
TP704	C-2
TP706	B-1
TP707	B-3
TP709	B-3
Adjustment	
T703	C-2
T704	C-2
T710	A-3
T711	C-1
VR701	B-4
VR702	B-4
VR741	B-3
VR751	B-1

ADDRESS INFORMATION

Next Page:
VPS PACK Section

3-23. VPS PACK SCHEMATIC DIAGRAM


D
C
B
A
1
2
3
4
5
6
IC7852 MN1280S (RESET CIRCUIT)
V1
OUTPUT CIRCUIT
POWER VOLTAGE DET
V2
VSS
VDD
RST
5.0
4.9
C7860 6.3V100
R7860 470
PACK PIN (TO CH SELECT)
GND 10
TMR. BUS LSN 9
TMR. BUS TLK 8
TMR. BUS CLK 7
6
5
BACK UP 5V 4
NON SW 5V 3
VIDEO IN 2
GND 1
4.7
3.8
4.7
0
5.0
4.9
4.5
C7851 0.1
C7852 10V100
X7851 EF0A4R0M03C2 (4.0MHz OSC)
C7853 33P
C7854 33P
VDD
OSC2 OSC1
P10 P33
IC7851 MN158413VSSY
VSS P70 SBT SBO SBI XI RST P03 O P40 I P41 I P20 P21
C7855 50V1
QR7851 DTC114EA (INV.)
10K
10K
4.9
0.2
R7852 3300
R7805 47K
C7815 0.1
C7816 6V330
R7802 75K
R7851 10K
C7856 50V1
D7851 MA165
47K
47K
QR7852 DTC144EA (RESET : ON)
R7806 3600
C7806 0.033
C7805 0.01
R7807 470K
IC7801 SAA4700
PLL WITH 5MHz OSC AND PHASE DET.
REFERENCE AND POWER-ON-RESET
FIELD SELECTOR AND LINE 16 DECODER
OUTPUT CONTROLLER
CLOCK REGENERATOR
TIME BASE
40BIT REGISTER
40BIT LATCH
MULTIPLEXER
DATA SLICER
INPUT CONTROLLER
SYNC SEPARATOR
I²C-BUS TRANSMITTER
C7802 470P
C7801 1000P
R7801 4700
C7803 4700P
C7804 0.1
R7804 10K
R7803 10K

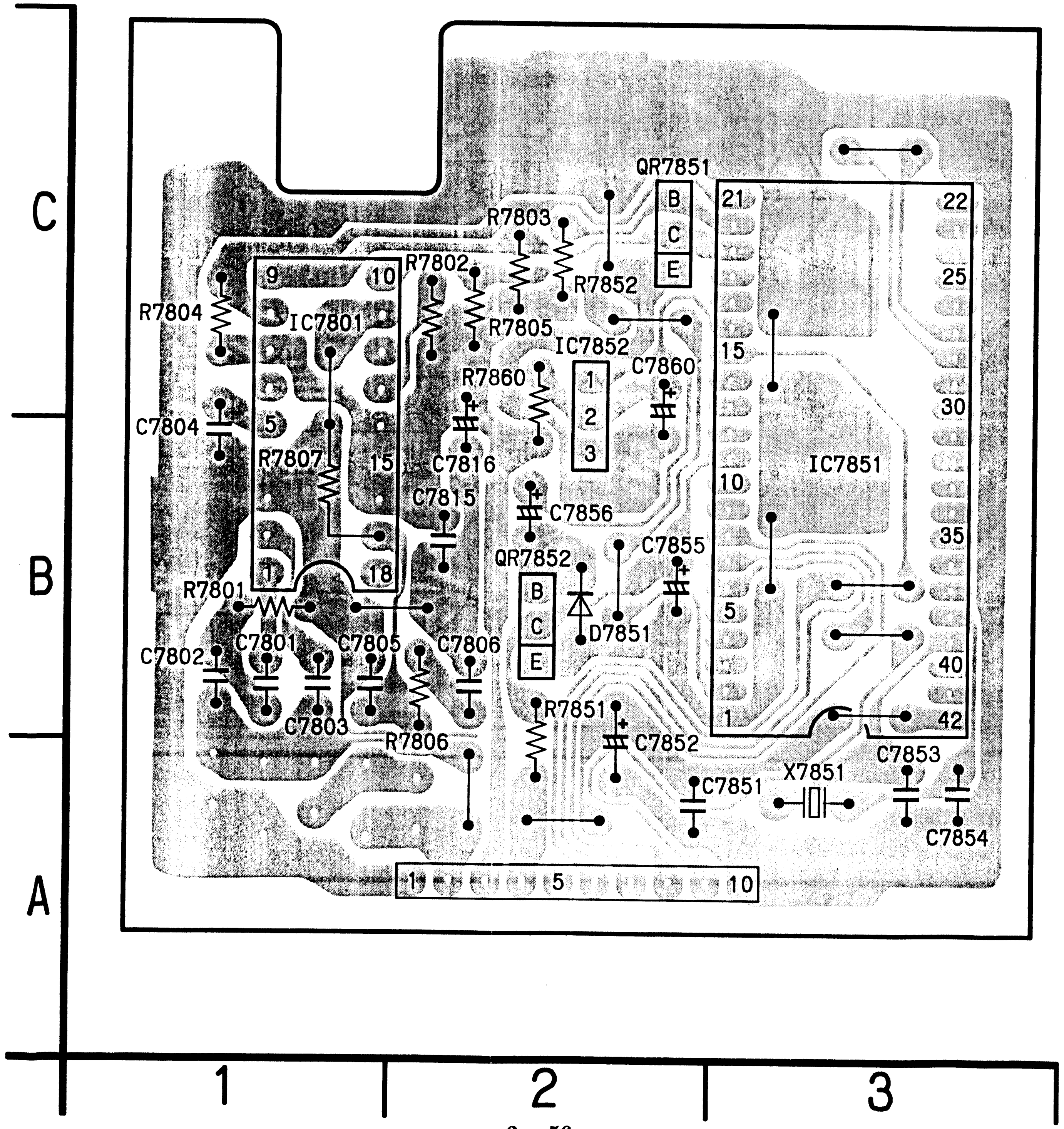
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

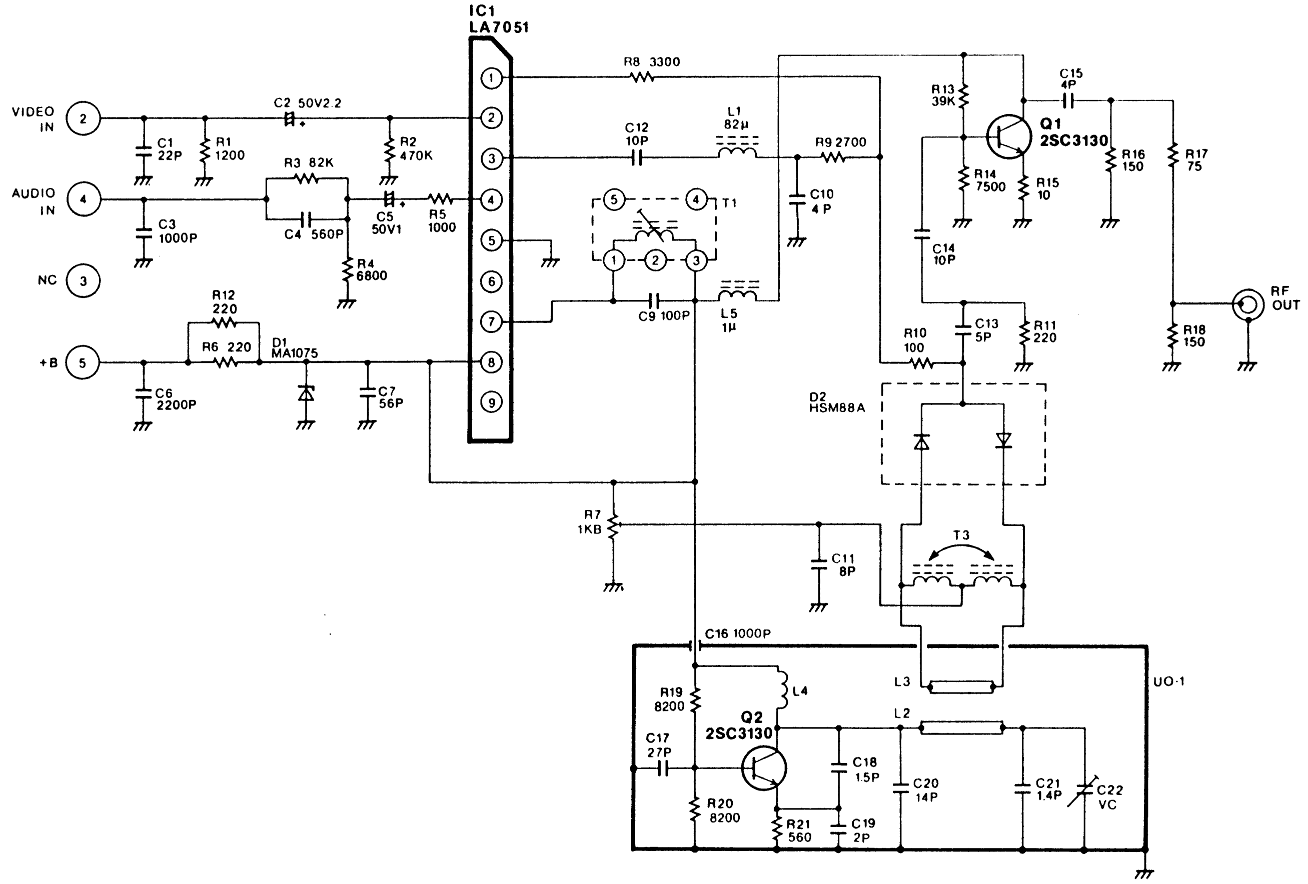
3-24. VPS PACK C.B.A. (VEP07538D)

VPS PACK C.B.A.	
Transistor & Resistor	
QR7851 QR7852	C-2 B-2
Interated Circuit	
IC7801 IC7851 IC7852	C-1 B-3 C-2

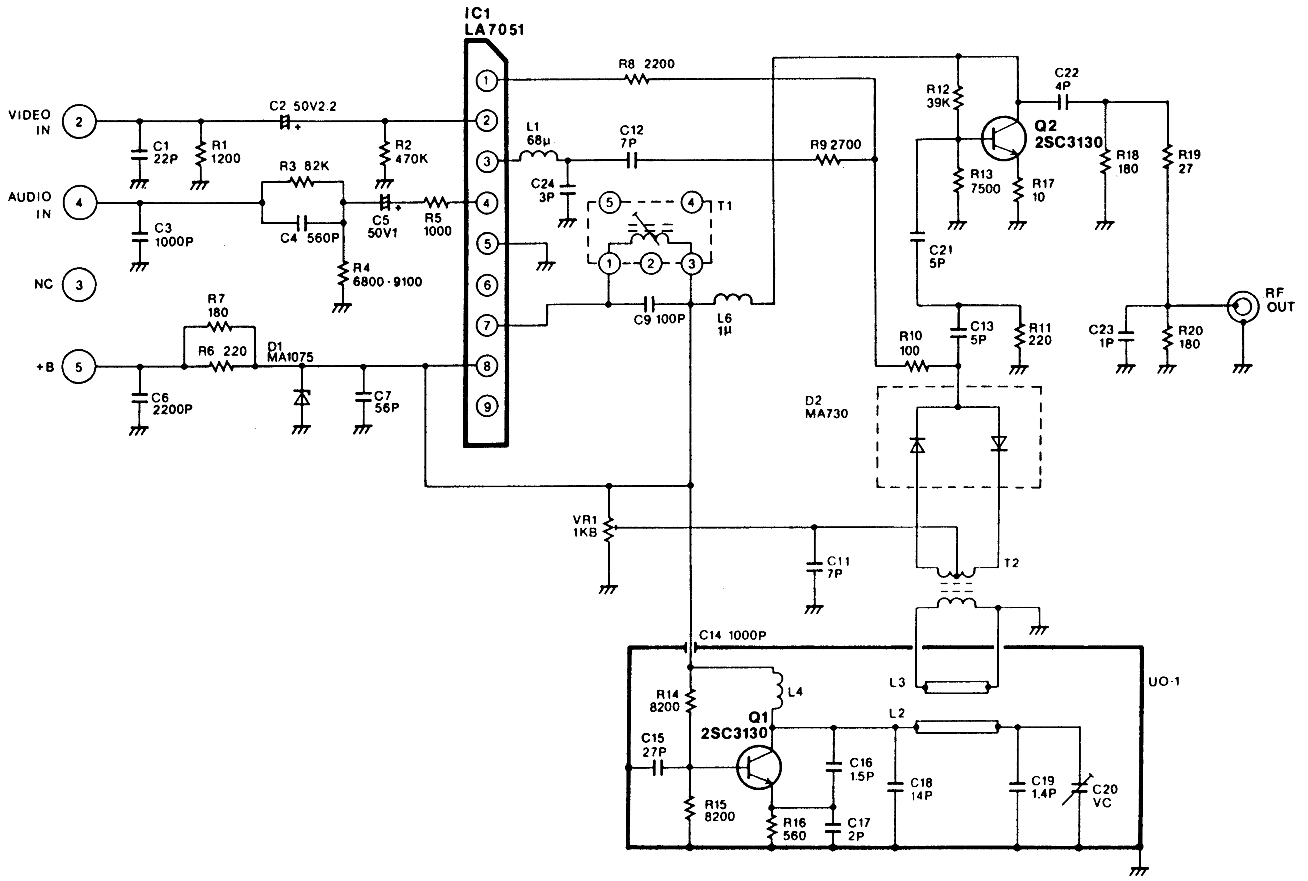
ADDRESS INFORMATION


C
B
A
1
2
3
QR7851
B
C
E
R7803
R7852
R7802
R7804
IC7801
R7805
IC7852
C7860
R7860
C7804
R7807
C7816
C7815
C7856
QR7852
C7855
R7801
D7851
C7802
C7801
C7805
C7806
C7803
R7806
R7851
C7852
C7851
X7851
C7853
C7854
IC7851
1
5
10
15
21
22
25
30
35
40
42
9
10
17
18
1
2
3

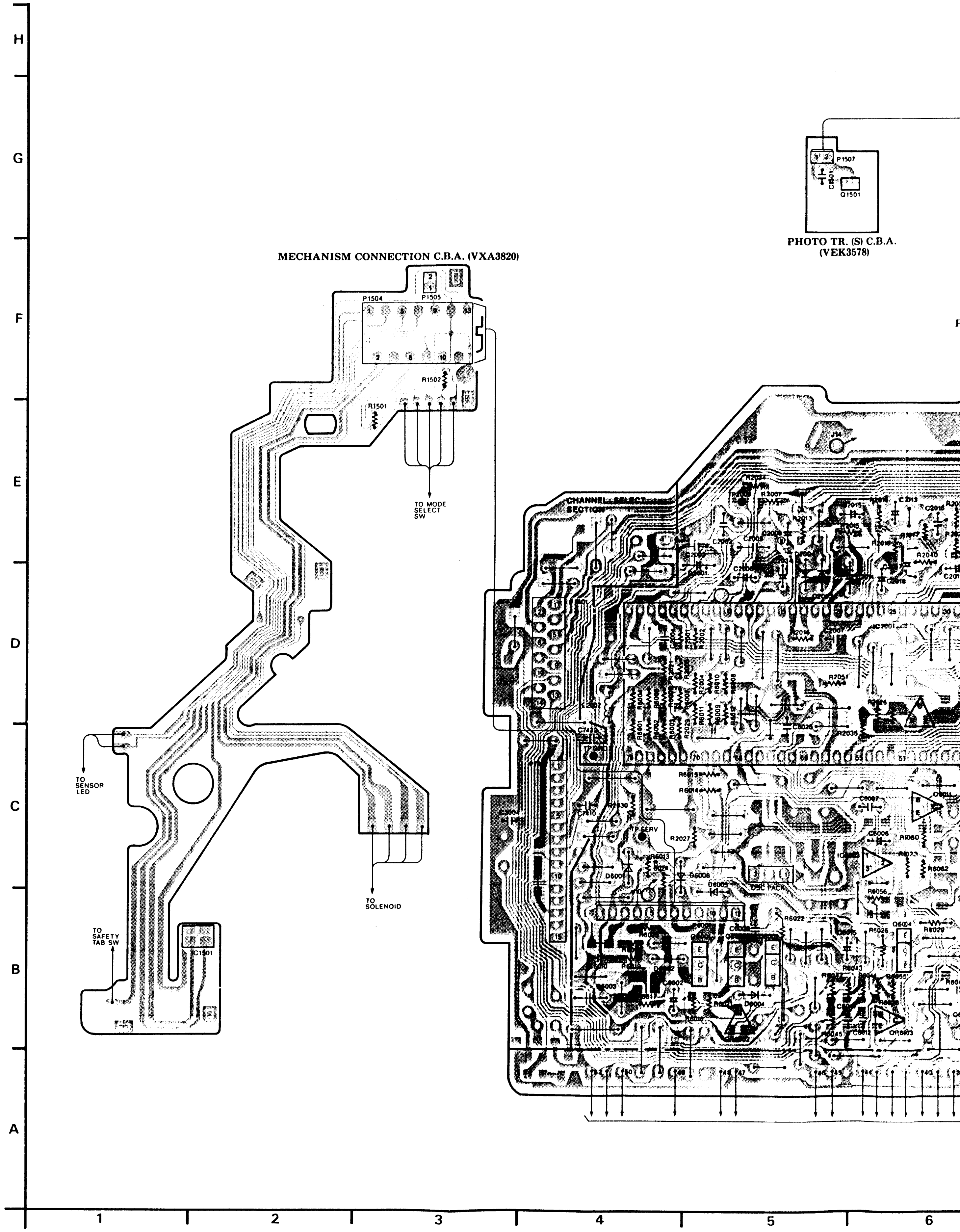
3-25. RF CONVERTER SCHEMATIC DIAGRAM (ENC17976)


IC1
LA7051
VIDEO IN ②
AUDIO IN ④
NC ③
+B ⑤
C1 22P
R1 1200
C2 50V2.2
R2 470K
R3 82K
C3 1000P
C4 560P
C5 50V1
R5 1000
R4 6800
R12 220
R6 220
D1 MA1075
C6 2200P
C7 56P
R8 3300
C12 10P
L1 82μ
R9 2700
C10 4P
T1
C9 100P
L5 1μ
R13 39K
Q1 2SC3130
C15 4P
R14 7500
R15 10
R16 150
R17 75
C14 10P
R10 100
C13 5P
R11 220
R18 150
RF OUT
D2 HSM88A
R7 1KB
C11 8P
T3
C16 1000P
R19 8200
L4
Q2 2SC3130
C17 27P
R20 8200
R21 560
L3
L2
C18 1.5P
C19 2P
C20 14P
C21 1.4P
C22 VC
UO-1

3-26. RF CONVERTER SCHEMATIC DIAGRAM (VEQ1043)


IC1
LA7051
VIDEO IN ②
AUDIO IN ④
NC ③
+B ⑤
C1 22P
R1 1200
C2 50V2.2
R2 470K
R3 82K
C3 1000P
C4 560P
C5 50V1
R5 1000
R4 6800·9100
R7 180
R6 220
D1 MA1075
C6 2200P
C7 56P
R8 2200
L1 68μ
C12 7P
C24 3P
R9 2700
T1
C9 100P
L6 1μ
R12 39K
Q2 2SC3130
C22 4P
R13 7500
R17 10
R18 180
R19 27
C21 5P
R10 100
C13 5P
R11 220
C23 1P
R20 180
RF OUT
D2 MA730
VR1 1KB
C11 7P
T2
C14 1000P
R14 8200
L4
Q1 2SC3130
C15 27P
R15 8200
R16 560
L3
L2
C16 1.5P
C17 2P
C18 14P
C19 1.4P
C20 VC
UO-1

3-27. MAIN C.B.A. (VEP03764BA)


H
G
F
E
D
C
B
A
1
2
3
4
5
6
PHOTO TR. (S) C.B.A. (VEK3578)
P1507
Q1501
MECHANISM CONNECTION C.B.A. (VXA3820)
P1504
P1505
R1502
R1501
TO MODE SELECT SW
TO SENSOR LED
TO SOLENOID
TO SAFETY TAB SW
IC1501
CHANNEL SELECT SECTION
DSC PACK

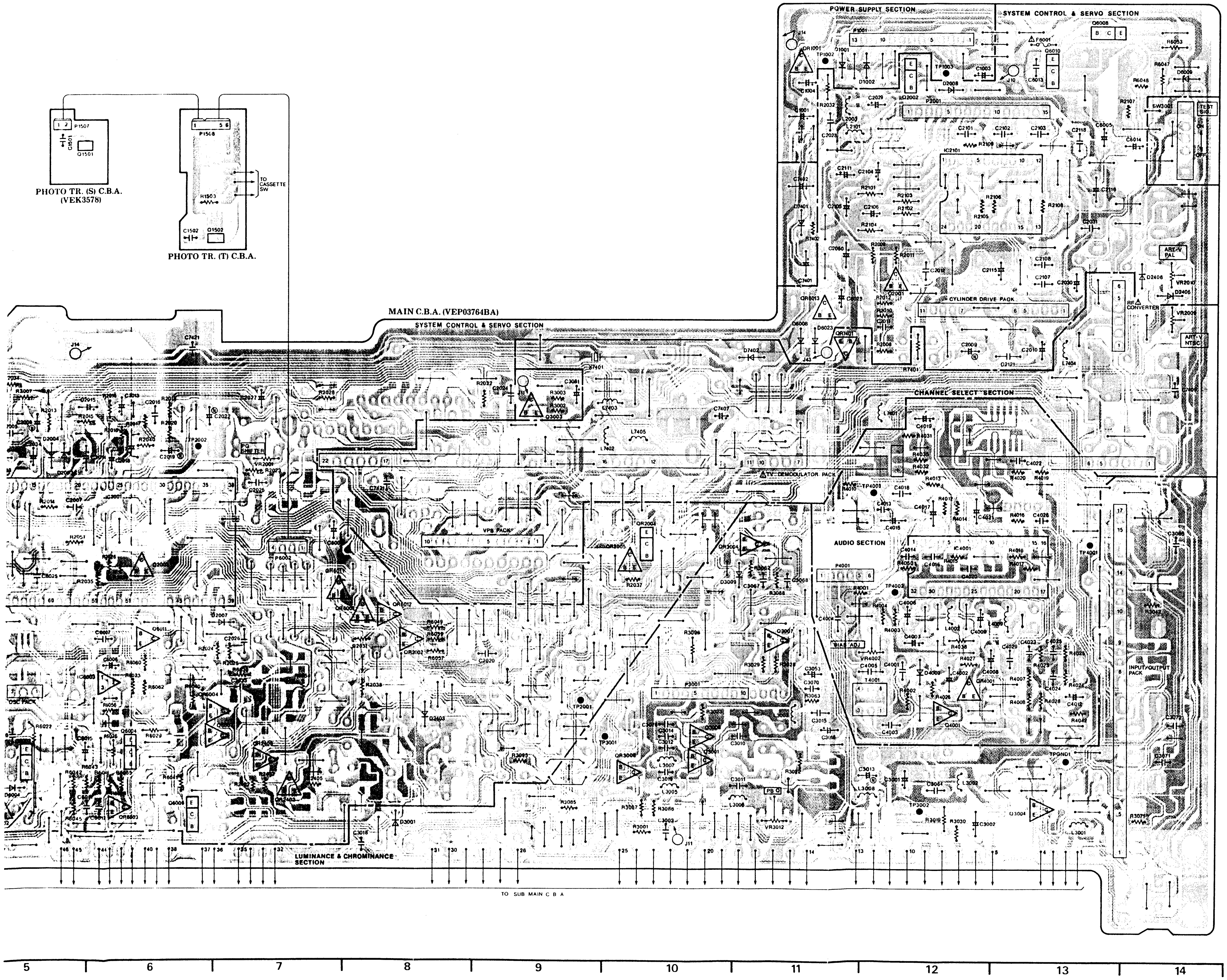


PHOTO TR. (S) C.B.A.
(VEK3578)
PHOTO TR. (T) C.B.A.
P1507
Q1501
P1508
H1503
C1502
Q1502
TO CASSETTE SW
MAIN C.B.A. (VEP03764BA)
POWER SUPPLY SECTION
SYSTEM CONTROL & SERVO SECTION
CYLINDER DRIVE PACK
RF CONVERTER
CHANNEL SELECT SECTION
TV DEMODULATOR PACK
VPS PACK
AUDIO SECTION
INPUT/OUTPUT PACK
BIAS ADJ
LUMINANCE & CHROMINANCE SECTION
TO SUB MAIN C B A
5
6
7
8
9
10
11
12
13
14

MAIN C.B.A. ADDRESS INFORMATION

POWER Section	
Transistor & Resistor	
QR1001	H-11
Test Point	
TP1002	H-11
TP1003	G-12
TPGND1	B-13
Connector	
P1001	H-12

ADDRESS INFORMATION

SYSTEM CONTROL & SERVO Section	
Transistor	
Q1501	G-6
Q1502	F-7
Q2001	F-12
Q2002	G-12
Q2003	D-6
Q6001	B-5
Q6002	B-5
Q6003	B-5
Q6004	B-6
Q6006	B-6
Q6007	B-7
Q6008	H-13
Q6010	H-13
Q6011	C-6
Transistor & Resistor	
QR2002	C-8
QR2004	D-10
QR2005	D-10
QR2402	B-7
QR2403	B-7
QR6002	B-5
QR6003	B-6
QR6004	B-7
QR6007	C-8
QR6011	D-7
QR6012	C-8
QR6013	F-11
Integrated Circuit	
IC1501	B-2
IC2001	D-6
IC2101	G-12
IC6003	C-6
Test Point	
TP2001	C-9
TP2002	E-6
TP2009	E-5
TPSERV	C-4
TPGND2	C-4
Adjustment	
VR2001	D-7
VR2009	E-14
VR2010	F-14
Connector	
P1504	F-3
P1505	F-3
P1507	G-5
P1508	G-6
P2001	G-12
P6001	B-5
P6002	D-7

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE Section	
Transistor	
Q3001	B-10
Q3003	E-9
Q3004	B-13
Q3006	B-10
Q3007	C-11
Transistor & Resistor	
QR3004	D-11
QR3008	B-10
Test Point	
TP3001	B-10
TP3002	B-12
Adjustment	
VR3012	B-11
Connector	
P3001	C-10

ADDRESS INFORMATION

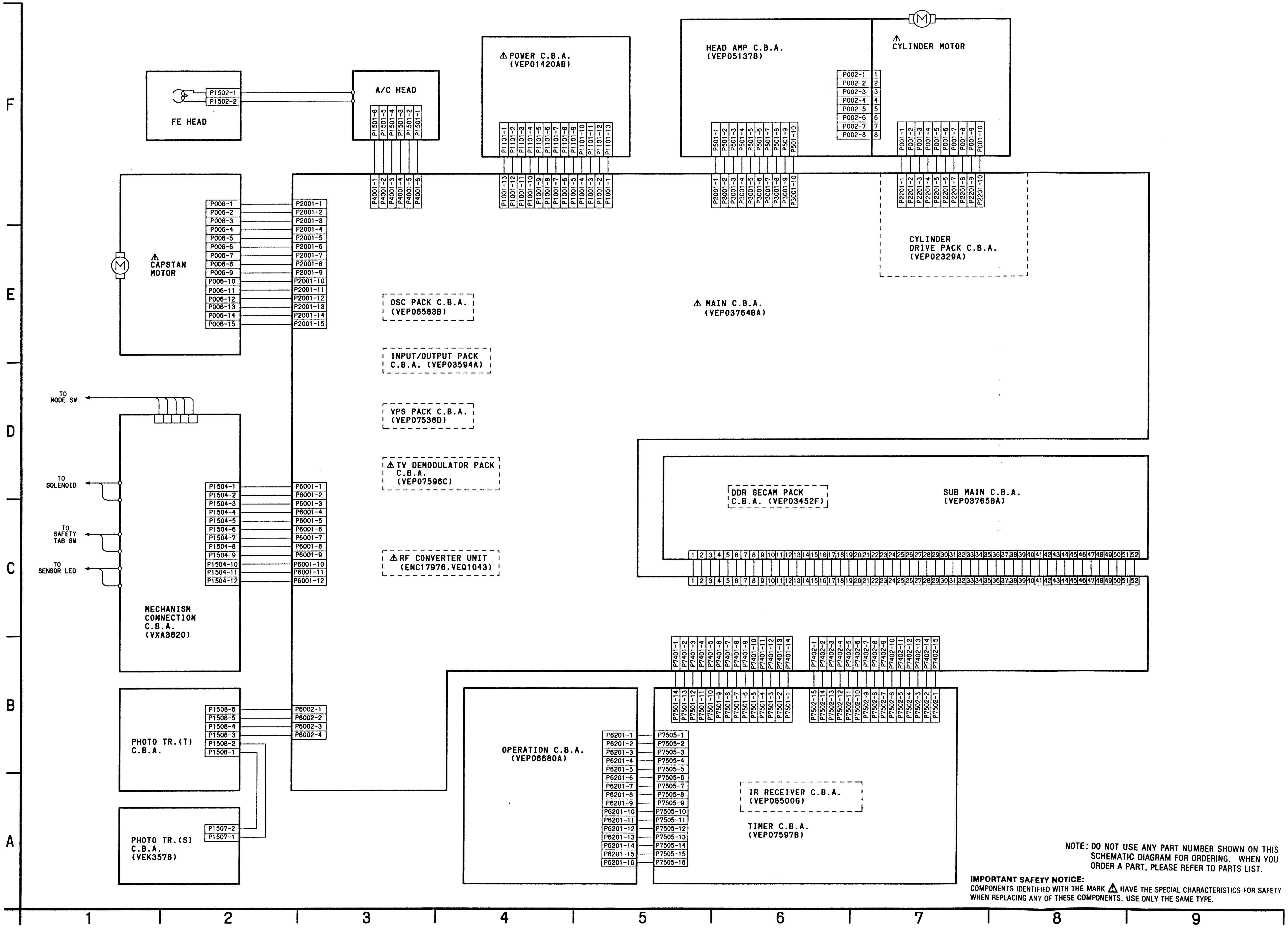
AUDIO Section	
Transistor	
Q4001	B-12
Transistor & Resistor	
QR4001	C-12
Integrated Circuit	
IC4001	D-12
Test Point	
TP4001	D-13
TP4002	C-12
TP4003	D-12
Adjustment	
VR4002	C-12
Connector	
P4001	D-11

ADDRESS INFORMATION

CHANNEL SELECT Section	
Transistor & Resistor	
QR7401	E-11
Connector	
P7401	D-4
P7402	C-4

ADDRESS INFORMATION

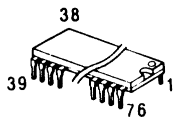
3-30. INTERCONNECTION SCHEMATIC DIAGRAMDIAGRAM


FE HEAD
P1502-1
P1502-2
A/C HEAD
P1501-1 ~ P1501-6
P4001-1 ~ P4001-6
⚠ POWER C.B.A.
(VEP01420AB)
P1101-1 ~ P1101-13
P1001-1 ~ P1001-13
HEAD AMP C.B.A.
(VEP05137B)
P501-1 ~ P501-10
P3001-1 ~ P3001-10
P002-1 ~ P002-8
⚠ CYLINDER MOTOR
P001-1 ~ P001-10
P2201-1 ~ P2201-10
CYLINDER
DRIVE PACK C.B.A.
(VEP02329A)
⚠ CAPSTAN
MOTOR
P006-1 ~ P006-15
P2001-1 ~ P2001-15
OSC PACK C.B.A.
(VEP06583B)
INPUT/OUTPUT PACK
C.B.A. (VEP03594A)
VPS PACK C.B.A.
(VEP07538D)
⚠ TV DEMODULATOR PACK
C.B.A.
(VEP07596C)
⚠ RF CONVERTER UNIT
(ENC17976.VEQ1043)
⚠ MAIN C.B.A.
(VEP03764BA)
TO
MODE SW
TO
SOLENOID
TO
SAFETY
TAB SW
TO
SENSOR LED
P1504-1 ~ P1504-12
P6001-1 ~ P6001-12
MECHANISM
CONNECTION
C.B.A.
(VXA3820)
DDR SECAM PACK
C.B.A. (VEP03452F)
SUB MAIN C.B.A.
(VEP03765BA)
1 ~ 52
P7401-1 ~ P7401-14
P7402-1 ~ P7402-15
P7501-1 ~ P7501-14
P7502-1 ~ P7502-15
PHOTO TR.(T)
C.B.A.
P1508-1 ~ P1508-6
P6002-1 ~ P6002-4
PHOTO TR.(S)
C.B.A.
(VEK3578)
P1507-1
P1507-2
OPERATION C.B.A.
(VEP06680A)
P6201-1 ~ P6201-16
P7505-1 ~ P7505-16
IR RECEIVER C.B.A.
(VEP08500G)
TIMER C.B.A.
(VEP07597B)
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

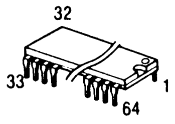
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

3-31. ICs & TRs INFORMATION



MN6740VCTK



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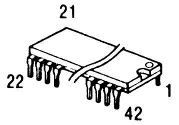

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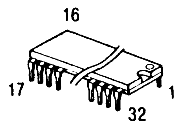
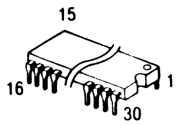
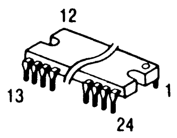


BA7274S
BA7766AS



M51366SP



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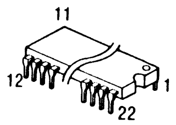
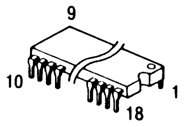
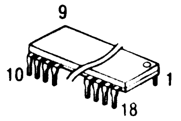


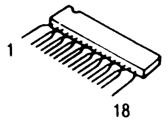
LA7150



SAA4700



AN3814K



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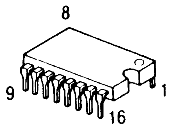

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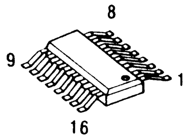

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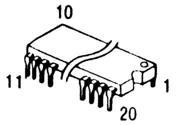

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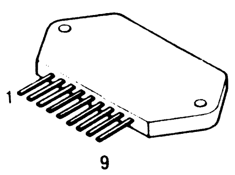

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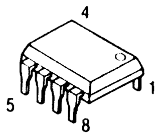

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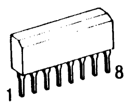

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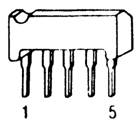
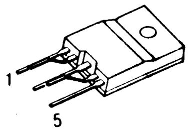


BA7004



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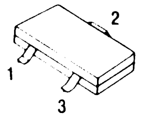

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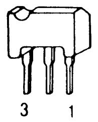

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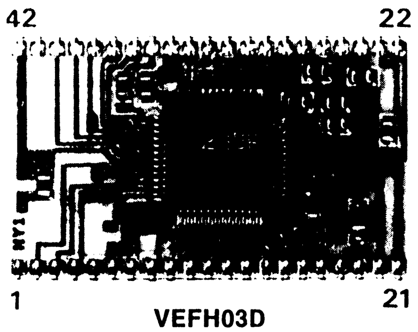
MN1280S



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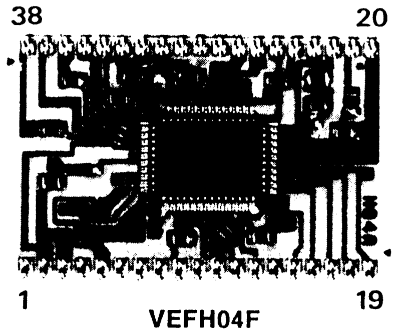
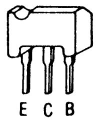


VEFH04F

Back Page:
INTERCONNECTION Section



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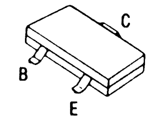
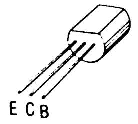
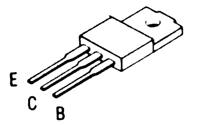
2SC2206
2SC2377
2SD638
2SD1330
2SD1991A
2SD1992
2SD1994
2SD1996



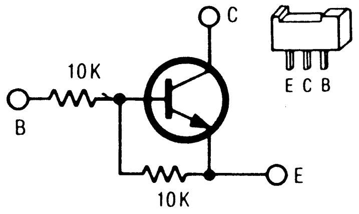
2SB709 MSB709
2SB710 MSB710
2SC2295 MSC2295
2SD1328 MSD601
2SD601 MSD602
2SD602



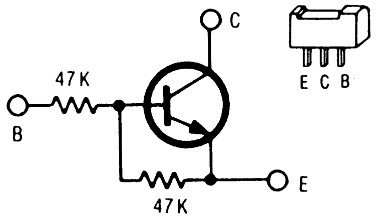
2SD893



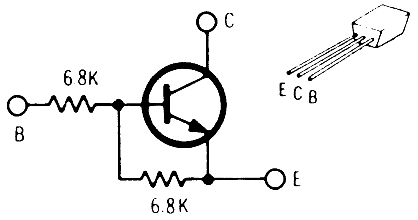
2SD1273


C
E C B
10K
B
E
10K

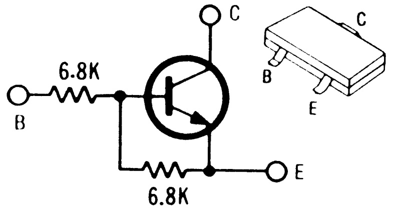
UN1211
DTC114EA


C
E C B
47K
B
E
47K

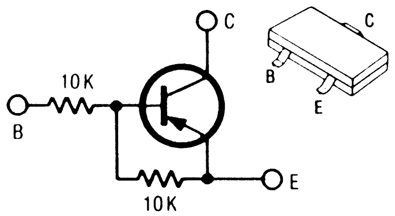
UN1213
DTC144EA


C
6.8K
E C B
B
E
6.8K

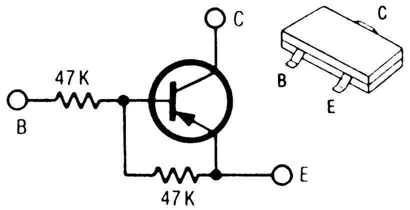
2SD1676


C
C
6.8K
B
B
E
E
6.8K

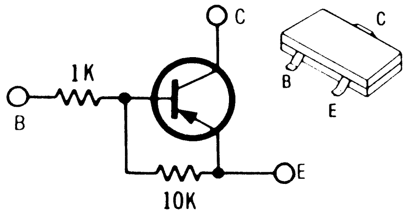
DTC363EK


C
C
10K
B
B
E
E
10K

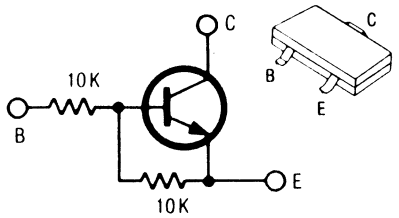
UN2111
MRN2402


C
C
47K
B
B
E
E
47K

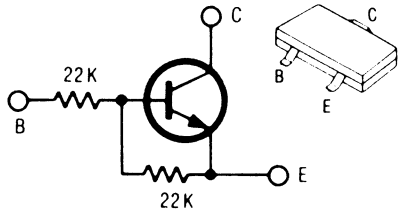
UN2113
MRN2404


C
C
1K
B
B
E
E
10K

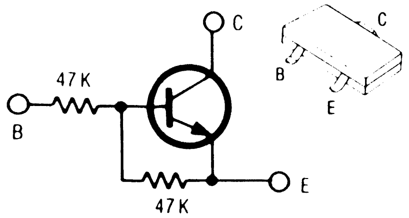
UN2119


C
C
10K
B
B
E
E
10K

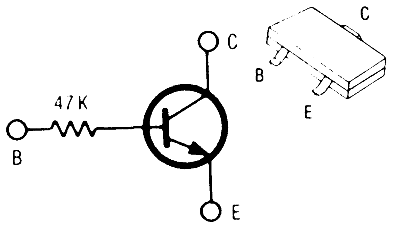
UN2211
MRN1402


C
C
22K
B
B
E
E
22K

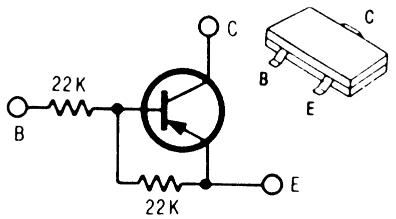
UN2212
MRN1403


C
C
47K
B
B
E
E
47K

UN2213
MRN1404



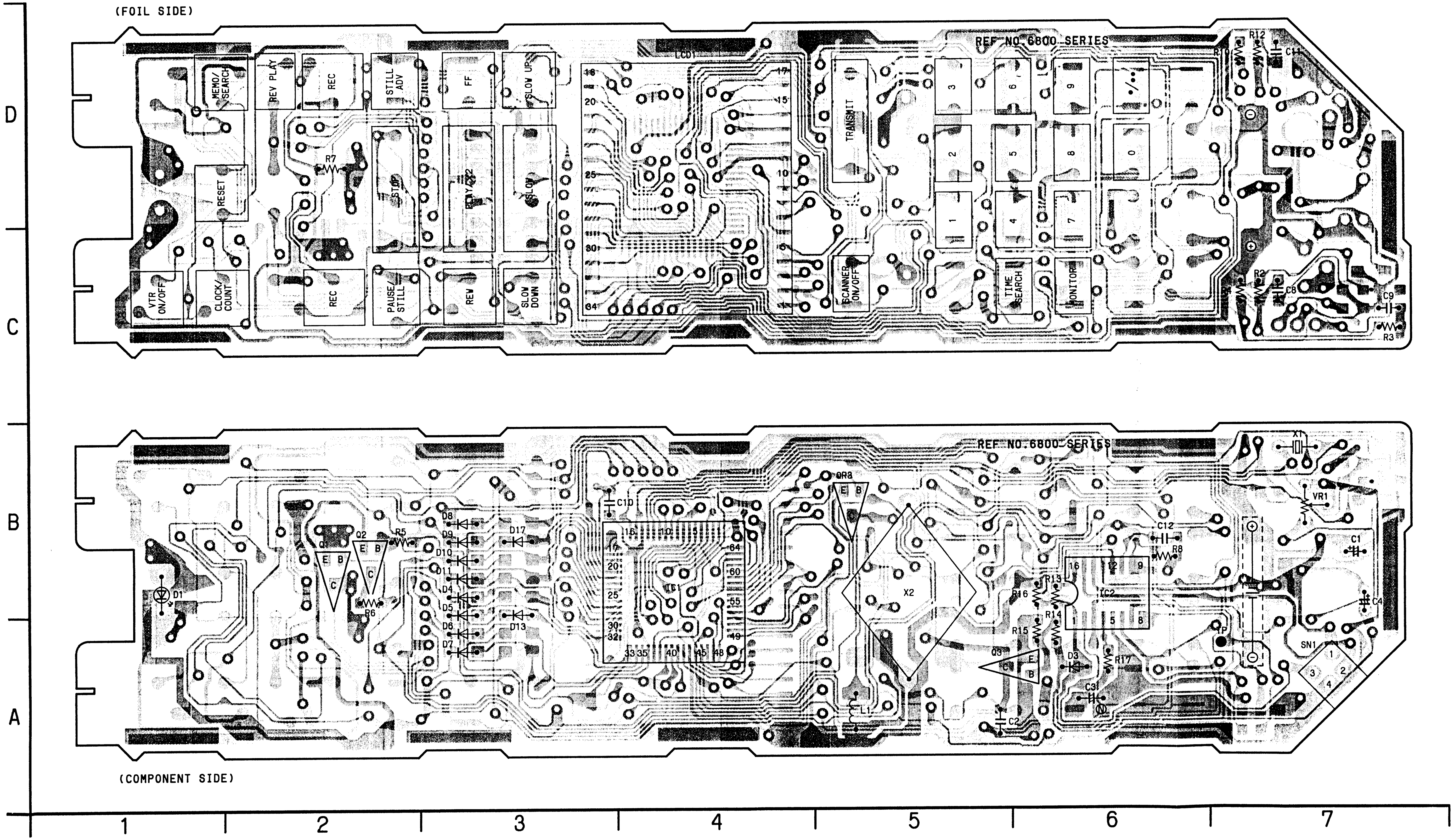
UN2216
DTC143TK


C
C
22K
B
B
E
E
22K

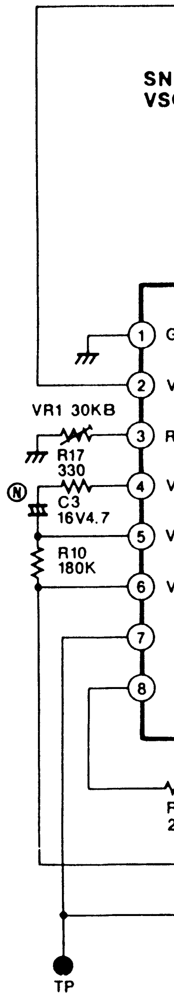
MRN2403
UN2112

3-28. REMOTE CONTROLLER (BUILD IN DIGITAL SCANNER) SCHEMATIC DIAGRAM

—— UNIT NO.: VEQ1110 ——


(FOIL SIDE)
REF. NO. 6800 SERIES
MEMO/SEARCH
REV PLAY
REC
STILL ADV
FF
SLOW UP
LCD1
TRANSMIT
3
6
9
•/••
2
5
8
0
1
4
7
RESET
STOP
PLAY/X2
SLOW
R7
VTR ON/OFF
CLOCK/COUNT
REC
PAUSE/STILL
REW
SLOW DOWN
SCANNER ON/OFF
TIME SEARCH
MONITOR
R1
R12
C11
R2
C8
C9
R3
16
17
20
15
25
10
30
64
(COMPONENT SIDE)
REF. NO. 6800 SERIES
X1
C10
QR8
E
B
D8
D9
D10
D11
D4
D5
D6
D7
D17
D13
Q1
Q2
R5
R6
D1
IC1
16
10
17
20
25
30
32
33
35
40
45
48
49
55
60
64
X2
L1
C12
R8
R13
R16
R14
R15
IC2
Q3
D3
R17
C3
C2
VR1
C1
C4
SN1
TP
D
C
B
A
1
2
3
4
5
6
7

3-29. RE

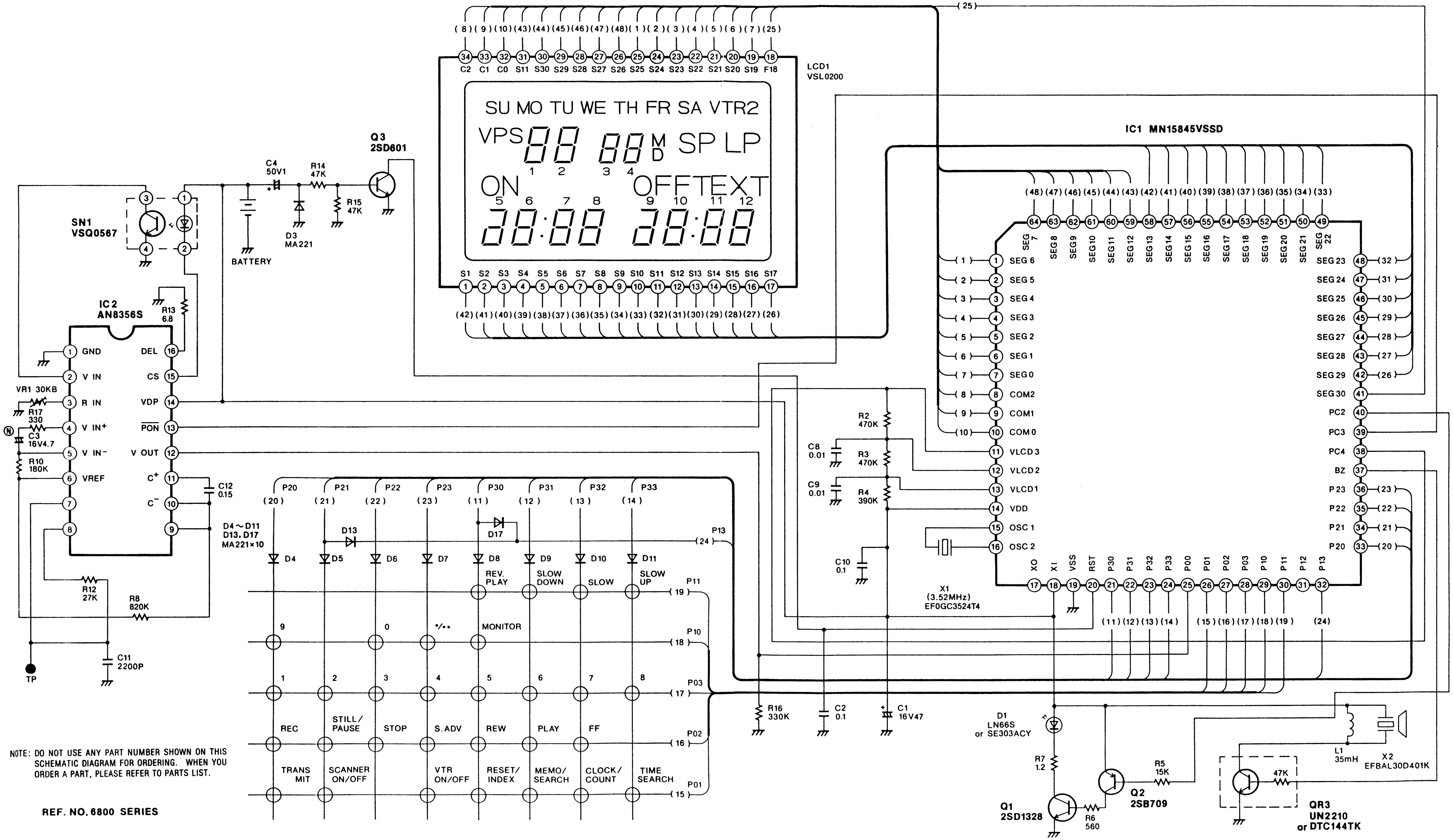

SN
VS
VR1 30KB
R17
330
C3
16V4.7
R10
180K
1
2
3
4
5
6
7
8
TP

NOTE: DO NOT USE
SCHEMATIC D
ORDER A PAR

REF. NO

Back Page:
RF CONV. & MAIN C.B.A. Section

3-29. REMOTE CONTROLLER (BUILD IN DIGITAL SCANNER) C.B.A. (VEP66125E)


LCD1
VSL0200
SU MO TU WE TH FR SA VTR2
VPS 88 88 M D SP LP
ON OFF TEXT
1 2 3 4 5 6 7 8 9 10 11 12
C2 C1 C0 S11 S30 S29 S28 S27 S26 S25 S24 S23 S22 S21 S20 S19 F18
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17
IC1 MN15845VSSD
SEG 6 SEG 5 SEG 4 SEG 3 SEG 2 SEG 1 SEG 0 COM2 COM1 COM0 VLCD3 VLCD2 VLCD1 VDD OSC 1 OSC 2
SEG 7 SEG 8 SEG 9 SEG10 SEG11 SEG12 SEG13 SEG14 SEG15 SEG16 SEG17 SEG18 SEG19 SEG20 SEG21 SEG 22
SEG 23 SEG 24 SEG 25 SEG 26 SEG 27 SEG 28 SEG 29 SEG 30 PC2 PC3 PC4 BZ P23 P22 P21 P20
XO XI VSS RST P30 P31 P32 P33 P00 P01 P02 P03 P10 P11 P12 P13
Q3
2SD801
C4
50V1
R14
47K
R15
47K
D3
MA221
BATTERY
SN1
VSQ0567
IC2
AN8356S
R13
6.8
GND
V IN
R IN
V IN+
V IN−
VREF
DEL
CS
VDP
PON
V OUT
C+
C−
VR1 30KB
R17
330
C3
16V4.7
R10
180K
C12
0.15
R12
27K
R8
820K
C11
2200P
TP
P20 P21 P22 P23 P30 P31 P32 P33
D4～D11
D13, D17
MA221×10
D13
D17
D4 D5 D6 D7 D8 D9 D10 D11
P13
REV. PLAY
SLOW DOWN
SLOW
SLOW UP
P11
9
0
•/••
MONITOR
P10
1 2 3 4 5 6 7 8
P03
REC
STILL/ PAUSE
STOP
S. ADV
REW
PLAY
FF
P02
TRANS MIT
SCANNER ON/OFF
VTR ON/OFF
RESET/ INDEX
MEMO/ SEARCH
CLOCK/ COUNT
TIME SEARCH
P01
R2
470K
R3
470K
R4
390K
C8
0.01
C9
0.01
C10
0.1
X1
(3.52MHz)
EF0GC3524T4
R16
330K
C2
0.1
C1
16V47
D1
LN66S
or SE303ACY
R7
1.2
Q1
2SD1328
R6
560
R5
15K
Q2
2SB709
QR3
UN2210
or DTC144TK
47K
L1
35mH
X2
EFBAL30D401K

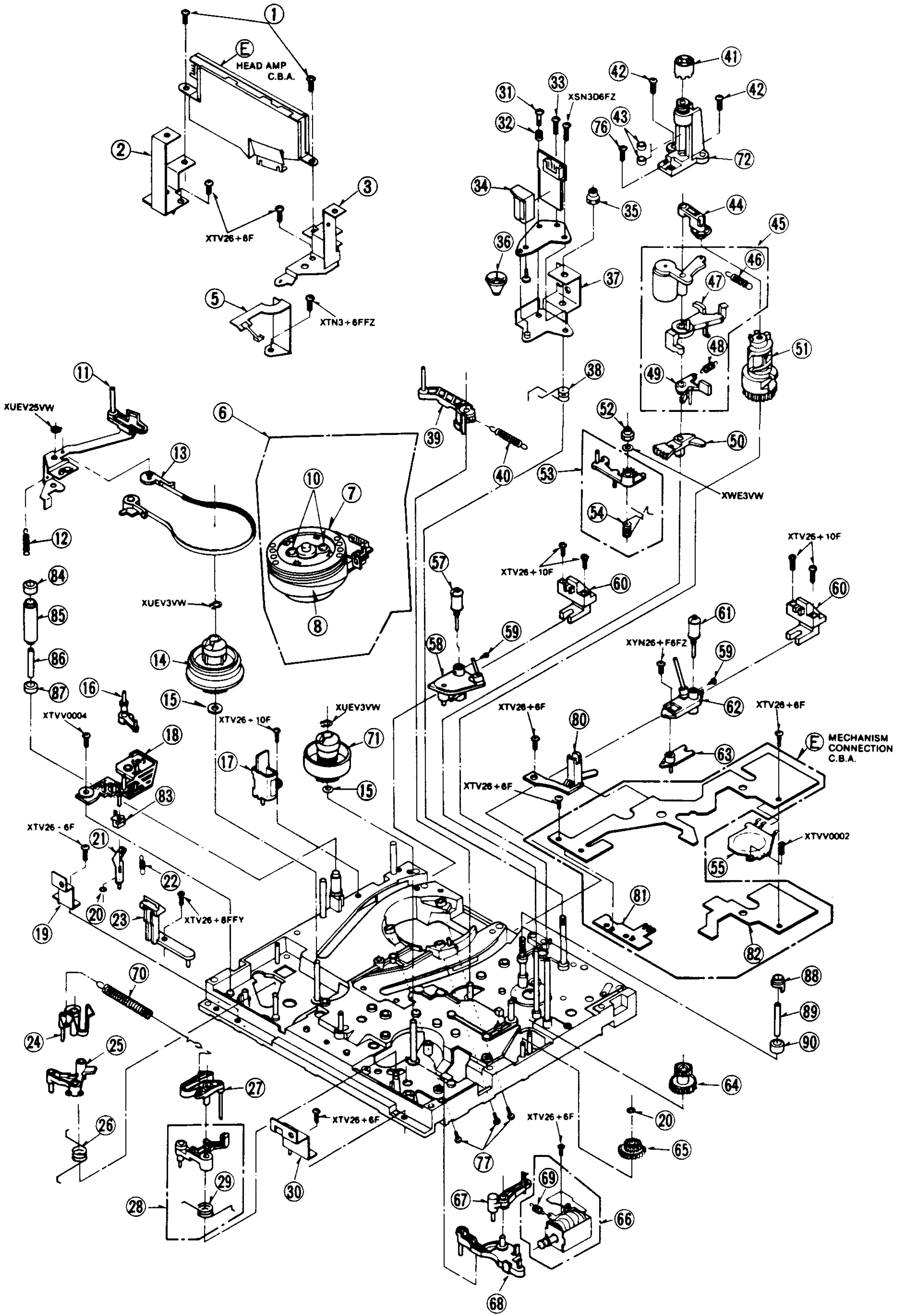
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

REF. NO. 6800 SERIES

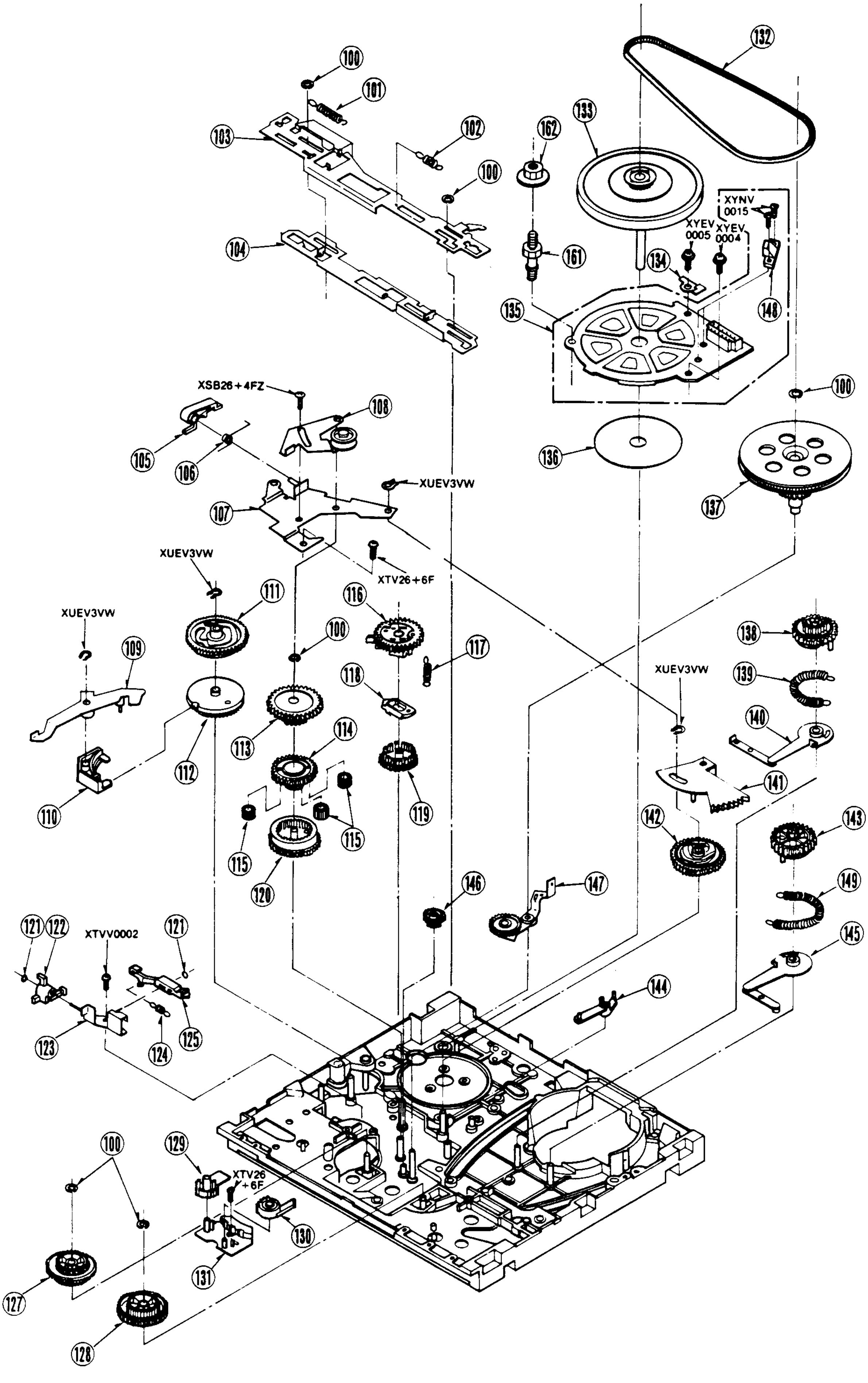
SECTION 4
EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEW

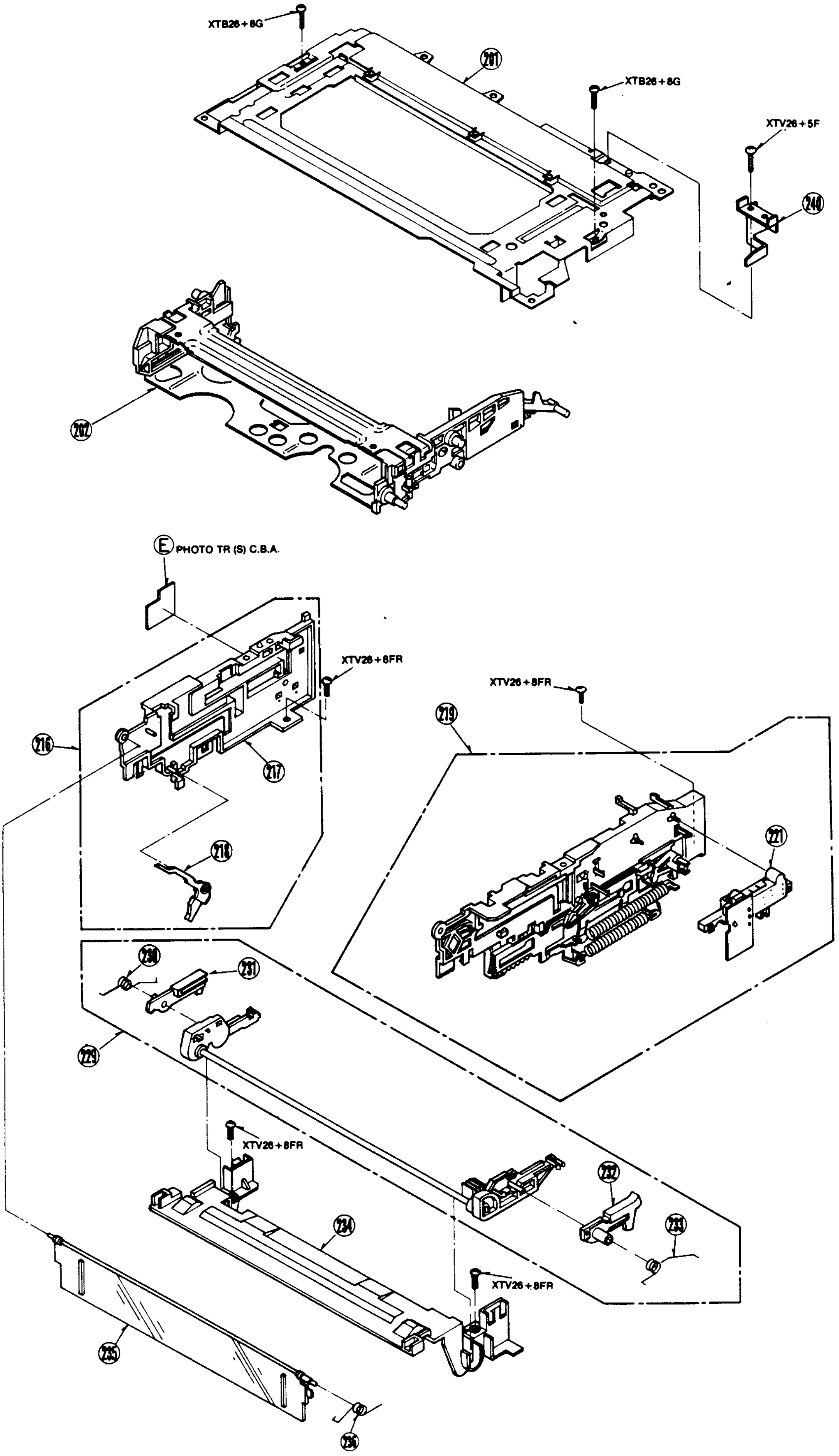
❶ CHASSIS PARTS SECTION (1)


①
Ⓔ HEAD AMP C.B.A.
②
③
XTV26+6F
⑤
XTN3+6FFZ
㉛
㉜
㉝
XSN3D6FZ
㊷
㊶
㊷
㊸
(76)
(72)
㉞
㉟
㊱
㊲
㊹
㊺
㊻
㊼
㊽
㊾
(51)
㊳
(52)
㊿
XWE3VW
(53)
(54)
⑪
XUEV25VW
⑥
⑬
⑩
⑦
㊴
㊵
⑫
(84)
(85)
(86)
(87)
XUEV3VW
⑧
⑭
⑮
⑯
XTVV0004
⑱
(83)
(57)
XTV26+10F
(60)
(59)
(58)
XTV26+10F
(60)
(61)
XYN26+F6FZ
(59)
(62)
(63)
XUEV3VW
(71)
⑮
XTV26+10F
⑰
XTV26+6F
(80)
XTV26+6F
XTV26+6F
Ⓔ MECHANISM CONNECTION C.B.A.
XTVV0002
(55)
(81)
(82)
XTV26-6F
㉑
㉒
⑳
㉓
XTV26+6FFY
⑲
(70)
㉔
㉕
㉖
㉗
㉘
㉙
XTV26+6F
㉚
(88)
(89)
(90)
(64)
⑳
(65)
XTV26+6F
(77)
(69)
(66)
(67)
(68)

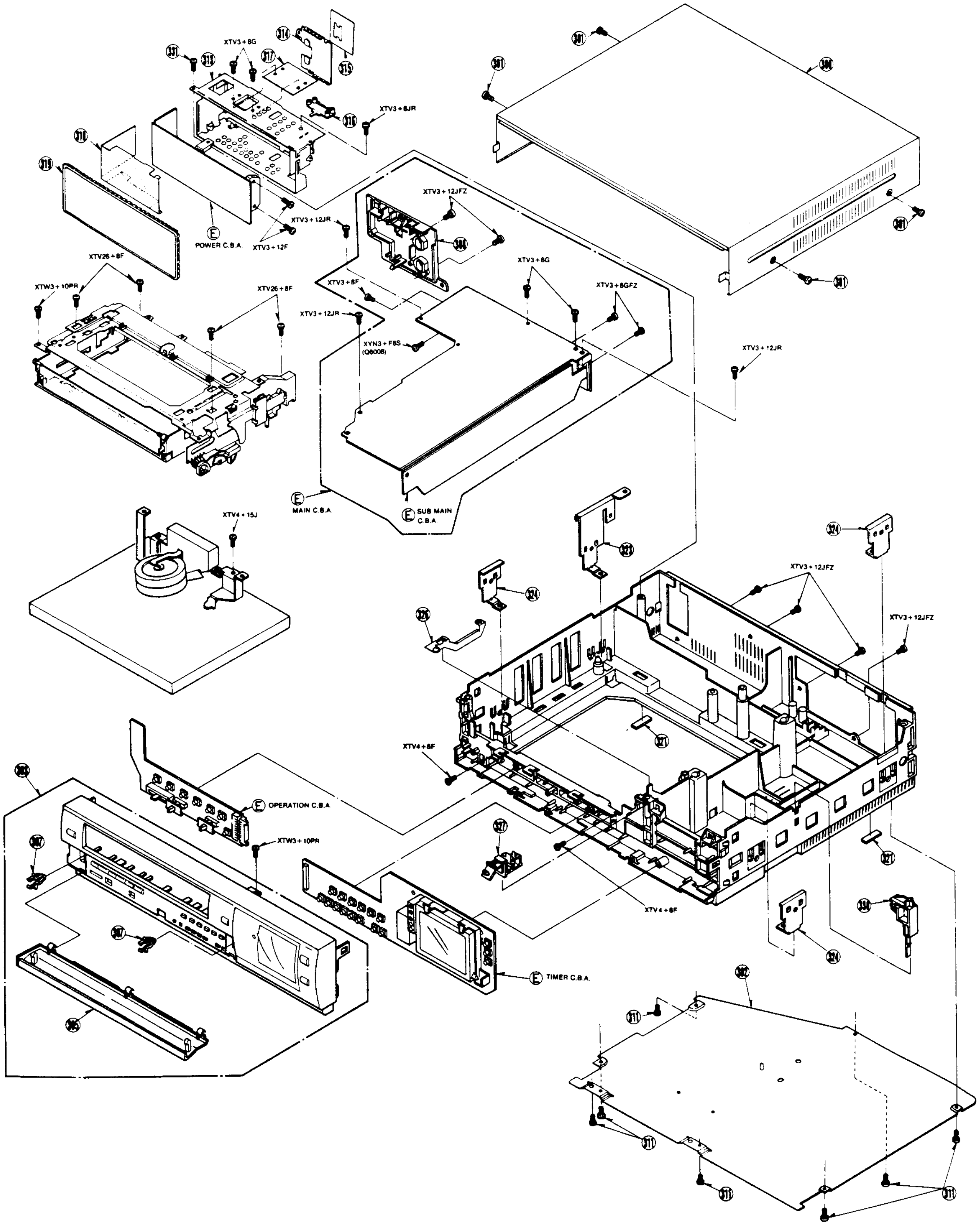
❷ CHASSIS PARTS SECTION (2)


100
101
102
103
100
104
162
133
132
XYNV 0015
XYEV 0005
XYEV 0004
161
134
148
135
100
XSB26+4FZ
108
105
106
136
137
XUEV3VW
107
XTV26+6F
XUEV3VW
111
116
100
117
XUEV3VW
109
118
138
139
XUEV3VW
140
112
113
114
110
119
141
115
115
120
142
143
146
147
149
121
122
XTVV0002
121
145
144
123
124
125
100
129
XTV26 +6F
130
131
127
128

❸ CASSETTE UP MECHANISM SECTION

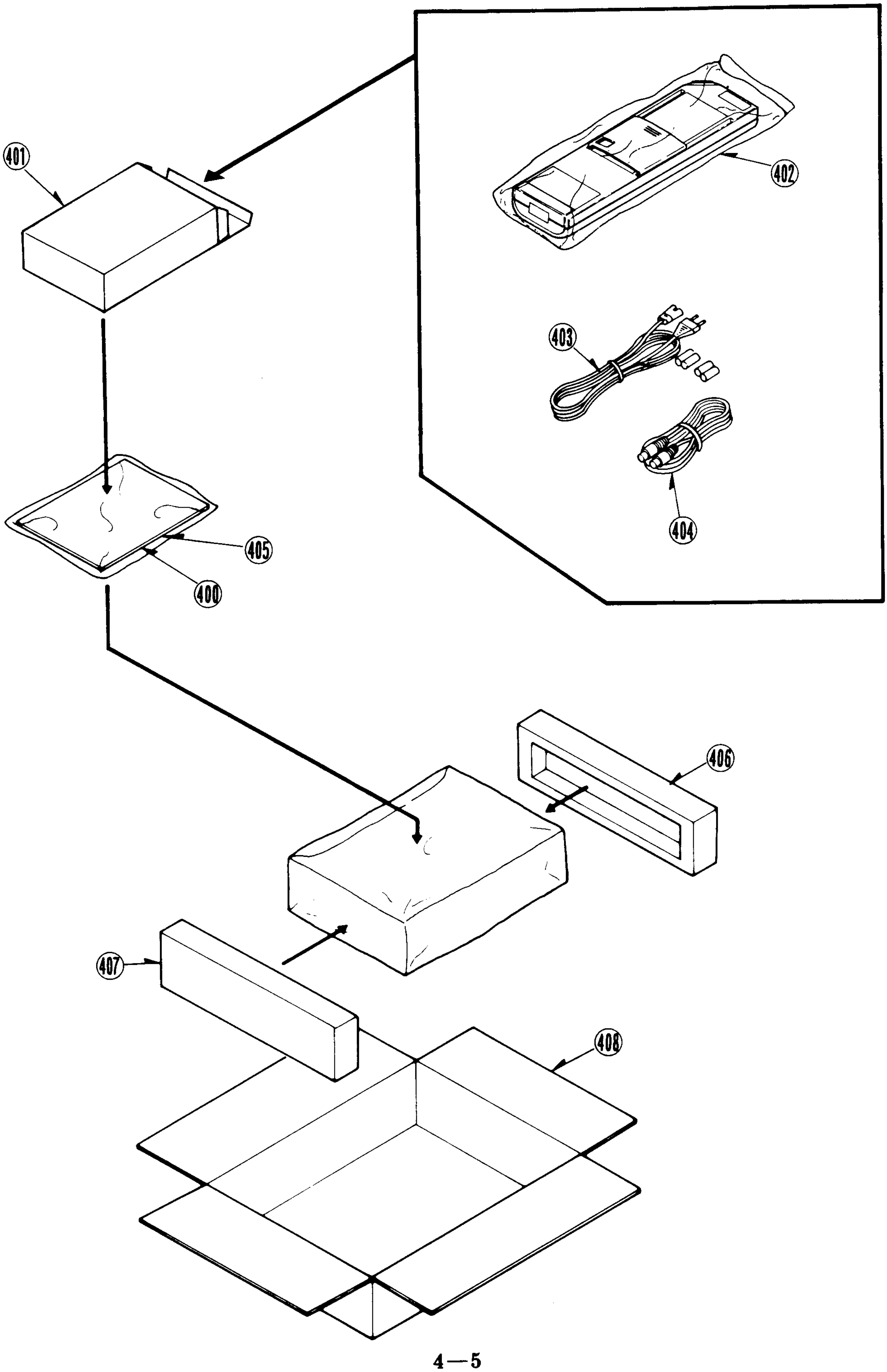

XTB26+8G
(201)
XTB26+8G
XTV26+5F
(240)
(202)
Ⓔ PHOTO TR (S) C.B.A.
XTV26+8FR
(216)
(217)
(218)
XTV26+8FR
(219)
(221)
(230)
(231)
(229)
XTV26+8FR
(232)
(234)
(233)
XTV26+8FR
(235)
(236)

❹ CASING PARTS SECTION

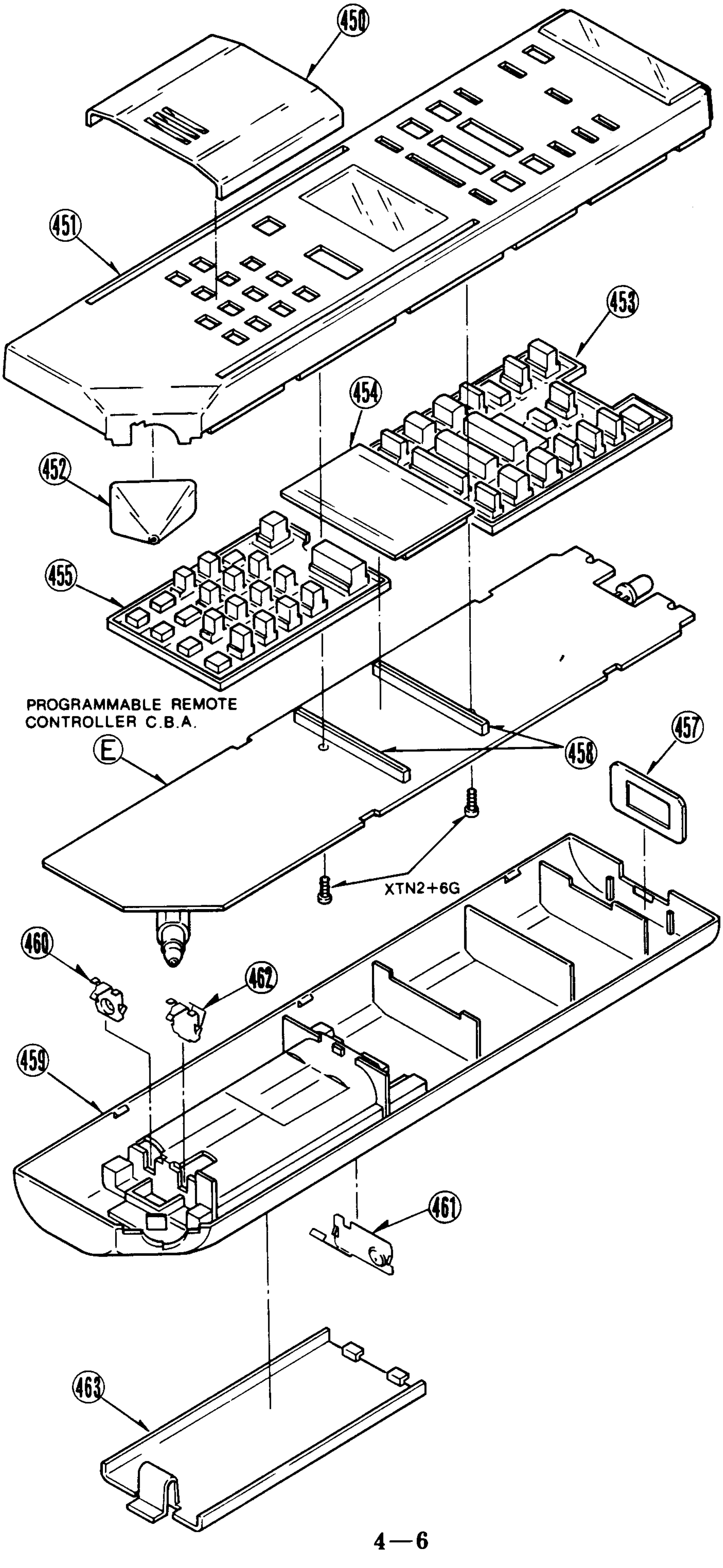


331
318
XTV3 + 8G
317
314
315
316
XTV3 + 8JR
310
319
POWER C.B.A.
XTV3 + 12JR
XTV3 + 12F
XTV26 + 8F
XTW3 + 10PR
XTV26 + 8F
301
301
300
301
301
XTV3 + 12JFZ
306
XTV3 + 8F
XTV3 + 12JR
XYN3 + F8S
(Q6008)
XTV3 + 8G
XTV3 + 8GFZ
XTV3 + 12JR
MAIN C.B.A.
SUB MAIN
C.B.A.
XTV4 + 15J
323
324
324
326
XTV3 + 12JFZ
XTV3 + 12JFZ
321
XTV4 + 8F
OPERATION C.B.A.
XTW3 + 10PR
307
307
327
XTV4 + 8F
321
324
334
TIMER C.B.A.
302
311
311
311
311

❺ PACKING PARTS SECTION


401
402
403
404
405
400
406
407
408

❻ REMOTE CONTROLLER (BUILD IN DIGITAL SCANNER) UNIT


450
451
453
454
452
455
PROGRAMMABLE REMOTE CONTROLLER C.B.A.
E
458
457
XTN2+6G
460
462
459
461
463

4-2. MECHANICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VHD0141	HEAD AMP SET SCREW	2	
2(1)		VMA6897	HEAD AMP MOUNT ANGLE (L)	1	
3(1)		VMA6898	HEAD AMP MOUNT ANGLE (R)	1	
5(1)		VXS0082	EARTH PLATE UNIT	1	
6(1)		VEG0758	CYLINDER UNIT	1	<!>
7(1)		VEH0416	UPPER CYLINDER UNIT	1	<!>
8(1)		VJR0082	RT TERMINAL	1	
10(1)		VHD0425	UPPER CYLINDER SET SCREW	2	
11(1)		VXL1495	TENSION ARM (1) UNIT	1	
12(1)		VMB1563	TENSION SPRING	1	
13(1)		VXZ0267	TENSION BAND UNIT	1	
14(1)		VXR0185	SUPPLY REEL TABLE UNIT	1	
15(1)		VMX1171	REEL WASHER (0.5mm)	2	
15(1)		VMX1239	REEL WASHER (0.3mm)	2	
15(1)		VMX1238	REEL WASHER (0.2mm)	2	
16(1)		VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)		VBS0038	FE HEAD	1	
18(1)		VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)		VMA6895	MOUNT ANGLE (L)	1	
20(1)		VMX1079	CUT WASHER	2	
21(1)		VXL1497	TENSION RELEASE ARM(B)UNIT	1	
22(1)		VMB1582	TENSION RELEASE SPRING	1	
23(1)		VES0489	SAFETY SW	1	
24(1)		VXZ0259	SUPPLY MAIN BRAKE UNIT	1	
25(1)		VXZ0274	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)		VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)		VXZ0262	TAKE UP MAIN BRAKE UNIT	1	
28(1)		VXZ0221	TAKE UP SOFT BRAKE UNIT	1	
29(1)		VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)		VMA6896	MOUNT ANGLE (R)	1	
31(1)		VHD0322	ADJUST SCREW	1	
32(1)		VMB1251	ADJUST SPRING	1	
33(1)		VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)		VBR0132	A/C HEAD	1	
35(1)		VHN0063	M4 NYLON NUT	1	
36(1)		VHN0110	ADJUST NUT	1	
37(1)		VMA7831	HEAD BASE	1	
38(1)		VMB1567	A/C HEAD SPRING	1	
39(1)		VXL1857	SUB LOADING ARM (1) UNIT	1	
40(1)		VMB1566	SUB POST SPRING	1	
41(1)		VXQ0006	THRUST SCREW UNIT	1	
42(1)		VHD0317	HOUSING SCREW	2	
43(1)		VMX1033	OIL SEAL	2	
44(1)		VMX1353	PINCH CAM CAP	1	
45(1)		VXL1858	PRESSURE ROLLER UNIT	1	
46(1)		VMB1941	PIN PRESSURE SPRING	1	
47(1)		VML2232	PINCH PRESSURE ARM	1	
48(1)		VMB1569	PINCH PRESSURE ARM RELEASE	1	
			SPRING		
49(1)		VML1874	PINCH LIFT ARM	1	
50(1)		VDG0597	P5 PULL OUT SECTOR GEAR	1	
51(1)		VDG0421	PINCH CAM	1	
52(1)		VHD0045	M3 NYLON NUT	1	
53(1)		VXL1485	P5 UNIT	1	
54(1)		VMB1554	P5 SPRING	1	
55(1)		VSS0175	MODE SW	1	
57(1)		VXP0863	ROLLER POST UNIT	1	
58(1)		VXA2729	INCLIND BASE (S)(1)UNIT	1	
59(1)		VHD0133	ROLLER POST SCREW	2	
60(1)		VMD0910	POST STOPPER	2	
61(1)		VXP0764A	ROLLER POST UNIT	1	
62(1)		VXA3876	INCLIND BASE(T)(1)UNIT	1	
63(1)		VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)		VDG0483	PINCH SPEED DOWN GEAR	1	
65(1)		VDG0332	CONNECTION GEAR	1	
66(1)		VXA3735	SOLENOID UNIT	1	
67(1)		VXA2692	KICK ROD UNIT	1	
68(1)		VML1849	SOLENOID LEVER (1) UNIT	1	
69(1)		VMB1553	KICK ROD SPRING	1	
70(1)		VMB1958	MAIN BRAKE SPRING	1	
71(1)		VXR0188	TAKE UP REEL TABLE UNIT	1	
72(1)		VXD0101	HOUSING UNIT	1	
76(1)		VHD0374	HOUSING SCREW	1	
77(1)		VHD0342	CYLINDER SCREW	3	
80(1)		VXA3520	LED HOLDER UNIT	1	
81(1)		VMA7844	REINFORCEMENT PLATE (F)	1	
82(1)		VMA7845	REINFORCEMENT PLATE (R)	1	
83(1)		VMB1733	LEAF SPRING	1	
84(1)		VMX1088	SUPPLY UPPER LIMITER	1	
85(1)		VDP1072	SUPPLY ROLLER	1	
86(1)		VMX1581	P1 COLLAR	1	
87(1)		VMX1533	SUPPLY ROLLER LIMITER	1	
88(1)		VMX1544	P4 UPPER LIMITER	1	
89(1)		VMX1568	P4 SLEEVE	1	
90(1)		VMX1534	P4 LOWER LIMITER	1	
100(2)		VMX1079	CUT WASHER	6	
101(2)		VMB1583	TAKE UP SOFT BRAKE RELEASE	1	
			ARM SPRING		
102(2)		VMB1560	MAIN LEVER SPRING	1	
103(2)		VXA3509	MAIN LEVER (1) UNIT	1	
104(2)		VMM0215	SUB LEVER	1	
105(2)		VXL1873	SS BRAKE ARM UNIT	1	
106(2)		VMB1588	SS BRAKE SPRING	1	
107(2)		VXA3512	SS BRAKE BASE (1) UNIT	1	
108(2)		VXA3516	TENSION ROLLER UNIT	1	
109(2)		VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)		VML1861	DETENT ARM	1	
111(2)		VDG0574	MAIN CAM GEAR	1	
112(2)		VDG0343	SUB CAM GEAR	1	
113(2)		VDG0348	CENTRE GEAR	1	
114(2)		VDG0422	RETAINER GEAR	1	
115(2)		VDG0345	PLANET GEAR	3	
116(2)		VDG0547	CLUTCH DISK	1	
117(2)		VMB1558	CLUTCH SPRING	1	
118(2)		VDG0350	LOCK SLIDE GEAR	1	
119(2)		VDG0335	DRIVE DISK	1	
120(2)		VDG0342	RING GEAR	1	
121(2)		VMX0967	CUT WASHER	2	
122(2)		VML1859	CHANGE LEVER	1	
123(2)		VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)		VMB1557	RELEASE SPRING	1	
125(2)		VML1860	RELEASE LEVER	1	
127(2)		VXP1002	TAKE UP REEL GEAR UNIT	1	
128(2)		VDG0445	SUPPLY REEL GEAR	1	
129(2)		VML1858	RETURN LEVER (R)	1	
130(2)		VML1857	RETURN LEVER (L)	1	
131(2)		VMD0913	STOPPER BASE	1	
132(2)		VDV0169	TIMING BELT	1	
133(2)		VXP1113	ROTOR UNIT	1	
134(2)		VMA7941	ROTOR STOPPER	1	
135(2)		VEK4105	STATOR UNIT	1	<!>
136(2)		VMA6847	SUB PLATE	1	
137(2)		VXP0917	CENTRE PULLEY UNIT	1	
138(2)		VDG0564	LOADING GEAR (T)	1	
139(2)		VMB1555	LOADING SPRING (T)	1	
140(2)		VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)		VXA3515	SECTOR GEAR UNIT	1	
142(2)		VDG0448	LOADING CAM GEAR	1	
143(2)		VDG0419	LOADING GEAR (S)	1	
144(2)		VML1855	PLAY CONTROL ARM	1	
145(2)		VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)		VDG0546	INTERMEDIATE GEAR	1	
147(2)		VXL1861	PLAY ARM UNIT	1	
148(2)		VBK0048	FG HEAD	1	
149(2)		VMB1746	LOADING SPRING(S)	1	
161(2)		VHD0431	STATOR SPACER SCREW	1	
162(2)		VHN0102	STATOR NUT	1	
201(3)		VMA7223	TOP PLATE	1	
202(3)		VXA3832	CASSETTE HOLDER UNIT	1	
216(3)		VXA2676	SIDE PLATE (L) UNIT	1	
217(3)		VMD0917	SIDE PLATE (L)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
218(3)		VML1880	OPENER LEVER	1	
219(3)		VXA3895	SIDE PLATE (R) UNIT	1	
221(3)		VXA4642	SLIDE SW UNIT	1	
229(3)		VXP0987	MAIN SHAFT UNIT	1	
230(3)		VMB1836	SUB WIPER SPRING (L)	1	
231(3)		VML1878	SUB WIPER ARM (L)	1	
232(3)		VML1879	SUB WIPER ARM (R)	1	
233(3)		VMB1837	SUB WIPER SPRING (R)	1	
234(3)		VMA6900	CASSETTE GUIDE	1	
235(3)		VKF1471	BLINDER PANEL	1	
236(3)		VMB1258	BLINDER SPRING	1	
240(3)		VMA7224	CASSETTE HOLDER ANGLE	1	
300(4)		VYP3043	TOP PANEL UNIT	1	
301(4)		VHD0304	TOP PANEL SCREW	4	
302(4)		VKU0309	BOTTOM PLATE	1	
303(4)		VYP3330	FRONT PANEL UNIT	1	
305(4)		VYF1596	FRONT DOOR UNIT	1	
307(4)		VGQ0550	DOOR LOCK PIECE	2	
308(4)		VEJ0989	ANT. TERMINAL PLATE	1	
311(4)		VHD0059	BOTTOM PLATE SCREW	7	
313(4)		VXA3635	POWER SHIELD CASE(MAIN)UNIT	1	
314(4)		VSC2351	POWER SHIELD COVER (TOP)	1	
315(4)		VGH1476	NAME PLATE	1	
316(4)		VGQ1377	IC. HOLDER	1	
317(4)		VMZ1224	INSULATION SHEET	1	
318(4)		VMZ1140	SW BARRIER(A)	1	
319(4)		VSC2237	POWER SHIELD COVER(BOTTOM)	1	
321(4)		VKA0084	RUBBER FOOT	2	
323(4)		VMP1995	TOP HOLDER ANGLE (RL)	1	
324(4)		VMP1037	TOP HOLDER ANGLE (L)	3	
326(4)		VMA7949	EARTH ANGLE	1	
327(4)		VKC0327	TIMER HINGE (A)	1	
330(4)		VJF0707	MAIN C.B.A. HOLDER	1	
331(4)		VHD0141	MAIN SCREW	1	
400(5)		VQT3829	OPERATING INSTRUCTIONS	1	<!>
			(ENGLISH/GERMAN/FRENCH)		
401(5)		VPK0825	ACCESSORIES BOX	1	
402(5)		VEQ1110	REMOTE CONTROL UNIT	1	
			(BUILD IN DIGITAL SCANNER)		
403(5)		VJA0449	AC POWER CORD	1	<!>
404(5)		VJA0376	DIN RF CABLE	1	
405(5)		VQC1315	PROGRAMME SHEET	1	
406(5)		VPN2356	CUSHION (R)	1	
407(5)		VPN2357	CUSHION (L)	1	
408(5)		VPG5629	PACKING	1	
450(6)		VKF1445	SLIDING LID	1	
451(6)		VYK3023	TOP COVER UNIT	1	
452(6)		VGQ1640	SENSOR CAP	1	
453(6)		VSP0507	RUBBER CONTACT (A)	1	
454(6)		VSL0200	LCD	1	
455(6)		VSP0508	RUBBER CONTACT (B)	1	
457(6)		VKW0878	IR WINDOW	1	
458(6)		VMT0297	BASE RUBBER(LCD)	2	
459(6)		VKM2169	BOTTOM COVER	1	
460(6)		VJR0585	ELECTRODE(+)	1	
461(6)		VJR0498	ELECTRODE(COM.)	1	
462(6)		VJR0584	ELECTRODE(-)	1	
463(6)		VKF1455	BATTERY COVER	1	
			SERVICING FIXTURES & TOOLS		
		VFJ8125H3F	VHS ALIGNMENT TAPE	1	
		VFK0335	RETAINING RING REMOVER	1	(3mm/4mm)
		VFK0387	TENSION POST ADJUSTMENT	1	
			PLATE		
		VFK0191	POST ADJUSTMENT PLATE	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFK0328	H-POSITION ADJUSTMENT	1	
			SCREWDRIVER		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK62	FAN TYPE TENSION GAUGE	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK0344	HEIGHT ADJUSTMENT JIG	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0341	UPPER CYLINDER REMOVER	1	

4-3. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.

2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.

4.The P.C.Board units marked width'▮'show below the main assembled parts.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03764BA	MAIN C.B.A.	1	<!> (NLA)
					INCLUDING THE
					SUB MAIN C.B.A.
					(VEP03765BA),
					SECAM PACK C.B.A.
					(VEP03452F),
					INPUT/OUTPUT C.B.A.
					(VEP03594A),
					TV DEMODULATOR C.B.A.
					(VEP07596C),
					CYLINDER DRIVE C.B.A.
					(VEP02329A),
					VPS C.B.A.
					(VEP07538D),
					OSC C.B.A.
					(VEP06583B).
		VEP03765BA	SUB MAIN C.B.A.	1	(NLA)
					INCLUDING THE
					SECAM PACK C.B.A.
					(VEP03452F).
					INCLUDED IN MAIN
					C.B.A.(VEP03764BA).
		VEP03452F	SECAM PACK C.B.A.	1	(NLA)
					INCLUDED IN SUB MAIN
					C.B.A.(VEP03765BA).
		VEP03594A	INPUT/OUTPUT C.B.A.	1	(NLA)
					INCLUDED IN MAIN
					C.B.A.(VEP03764BA).
		VEP07596C	TV DEMODULATOR C.B.A.	1	(NLA)
					INCLUDED IN MAIN
					C.B.A.(VEP03764BA).
		VEP02329A	CYLINDER DRIVE C.B.A.	1	(NLA)
					INCLUDED IN MAIN
					C.B.A.(VEP03764BA).
		VEP07538D	VPS C.B.A.	1	(NLA)
					INCLUDED IN MAIN
					C.B.A.(VEP03764BA).
		VEP06583B	OSC C.B.A.	1	(NLA)
					INCLUDED IN MAIN
					C.B.A.(VEP03764BA).
		VEP05137B	HEAD AMP C.B.A.	1	(NLA)
		VEP07597B	TIMER C.B.A.	1	(NLA)
					INCLUDING THE
					IR RECEIVER C.B.A.
					(VEP06500G).
		VEP06500G	IR RECEIVER C.B.A.	1	(NLA)
					INCLUDED IN TIMER
					C.B.A.(VEP07597B).
		VEP06680A	OPERATION C.B.A.	1	(NLA)
		VEP01420AB	POWER C.B.A.	1	<!> (NLA)
		VEP66125E	REMOTE CONTROL UNIT C.B.A.	1	(NLA)
		VXA3820	MECHANISM CONNECTION C.B.A.	1	(NLA)
		VEK3578	SUPPLY PHOTO Tr. C.B.A.	1	(NLA)
		- - - -	TAKE-UP PHOTO Tr. C.B.A.	1	THIS PART IS ICLUDE
					IN SLIDE SW UNIT.
					(VXA4642)
		ENC17976	RF CONVERTER	1	<!> OR VEQ1043
		ENV57850H6	TUNER	1	<!>
F1101		XBA2C16TB0	FUSE	1	<!>
	▮	VEP03764BA	MAIN C.B.A.		(NLA) <!>
			CAPACITORS		
C301		ECEA1EKN2R2	E.CAPACITOR 25V 2.2U	1	
C302		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C303		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C304		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C305		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C306		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C307		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C308		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C310		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C311,12		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	2	
C313		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C314		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C317		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C319		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C320		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C321		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C322		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C324		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C325,26		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C327,28		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C329		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C331		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C332		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C333		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C334		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C335		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C336		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C337		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C338		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C339		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C340		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C349		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C351		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C352		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C353		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C354		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C360		ECUM1H153ZFN	C.CAPACITOR CH 50V 0.015U	1	
C701		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C702		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C707		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C708		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C715-20		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C721		ECEA1HKR27K	E.CAPACITOR 50V 0.27U	1	
C722		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C723		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C727		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C728		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C730		ECEA1CK100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C731		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C732		ECQV1H224BO	P.CAPACITOR 50V 0.22U	1	
C734		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C735		ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C736		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C737		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C739		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C740		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C741		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C742		ECUM1H030CCN	C.CAPACITOR CH 50V 3P	1	
C743		ECUM1H270RSN	C.CAPACITOR CH 50V 27P	1	
C744		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C745		ECUM1H680JPN	C.CAPACITOR CH 50V 68P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C760		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C775		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C781		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C782		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C790		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C797,98		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C814		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C815		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C816		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C817		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C818		ECUM1H391KBN	C.CAPACITOR CH 50V 390P	1	
C819		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C820		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C821		ECEA1HFS4R7	E.CAPACITOR 50V 4.7U	1	
C823		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C824		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C825		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C826		ECEA1AU221	E.CAPACITOR 10V 220U	1	
C827		ECUM1H050DCN	C.CAPACITOR CH 50V 5P	1	
C828		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C829		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C830		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C831,32		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C833		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C839		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C840		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C841-49		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	9	
C851		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C852		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C853		ECEA10Z47	E.CAPACITOR 10V 47U	1	
C854		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C855		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C856		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C858		ECKF1H681KB	C.CAPACITOR 50V 680P	1	
C859		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C1001		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C1003		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C1004		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2001		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECQB1H472JZ	P.CAPACITOR 50V 4700P	1	
C2004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2005		ECQV1H394JZ	P.CAPACITOR 50V 0.39U	1	
C2006		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2007		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2008		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C2009		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C2010		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2011		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C2012		VCYD1E473KR	S.CAPACITOR 25V 0.047U	1	
C2013		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2014		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2015		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2016		ECQB1H223JZ	P.CAPACITOR 50V 0.022U	1	
C2017		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2018		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2019		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C2020		VCYD1E473KR	S.CAPACITOR 25V 0.047U	1	
C2022		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2024		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2025		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2026		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C2027		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2028		ECQB1H333JZ	P.CAPACITOR 50V 0.033U	1	
C2029		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C2030		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2031		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2033		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2034		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C2050		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2101-03		ECQB1H333JZ	P.CAPACITOR 50V 0.033U	3	
C2104-06		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2107,08		VCYD1E333KR	S.CAPACITOR 25V 0.033U	2	
C2111		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2115		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C2116		ECEA1EU221	E.CAPACITOR 25V 220U	1	
C2118		VCYD1E333KR	S.CAPACITOR 25V 0.033U	1	
C2121		ECQV1H184JZ	P.CAPACITOR 50V 0.18U	1	
C2201		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2203		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2204-06		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	3	
C2207		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2208-10		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2211		ECQB1H473JH	P.CAPACITOR 50V 0.047U	1	
C2212		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2213		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3001		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3002		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C3003,04		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3010		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3011		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3012		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	1	
C3013		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C3014		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3015		VCYD1E103KR	S.CAPACITOR 25V 0.01U	1	
C3016		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3053		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3064		ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C3065		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3067,68		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3070		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3071		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3072		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3076		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3081		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3101		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3102		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3103,04		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3105		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3808		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C3809		ECQB1H332JZ	P.CAPACITOR 50V 0.27U	1	
C3810		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3811		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3812		ECUM1H821KBN	C.CAPACITOR CH 50V 820P	1	
C3813		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3814		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3815,16		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3817		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C3818,19		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3820		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3821		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3822		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3901,02		ECEA1CK330	E.CAPACITOR 16V 33U	2	
C3903		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3904-06		ECEA1CK470	E.CAPACITOR 16V 47U	3	
C3907,08		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3909		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C3913		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3914		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3916		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C4001		ECQB1H153JZ	P.CAPACITOR 50V 0.015U	1	
C4002		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4003		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4004		ECQP1332JZ	P.CAPACITOR 100V 3300P	1	
C4005		ECCD2H121K	C.CAPACITOR 500V 120P	1	
C4006		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4007		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4008		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4009		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4012		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4013		ECUM1H681JN	C.CAPACITOR CH 50V 680P	1	
C4014		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4015		ECEA16M10R	E.CAPACITOR 16V 10.U	1	
C4016		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4017		ECEA10M47	E.CAPACITOR 10V 47U	1	
C4018		ECQB1H822JZ	P.CAPACITOR 50V 8200P	1	
C4019		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C4020		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4021		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C4022		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4023		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4024,25		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4029		ECQB1H123JZ	P.CAPACITOR 50V 0.012U	1	
C6001,02		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C6005		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6006		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C6007		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C6008		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6010		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C6011,12		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
C6013		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C6014		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C6015		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6023		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C6025		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6101		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6102		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6103		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6104		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C6105		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6106		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C7401		ECEA0JU221	E.CAPACITOR 6.3V 220U	1	
C7402		EECS5R5V473	E.CAPACITOR 5.5V 0.047	1	
C7407		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C7409		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7410		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7421		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7422		ECUM1H272KBN	C.CAPACITOR CH 50V 2700P	1	
C7431		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7651		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C7653		ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C7668		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7685		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7801		ECQB1H102JZ	P.CAPACITOR 50V 1000P	1	
C7802		ECQB1H471JZ	P.CAPACITOR 50V 470P	1	
C7803		ECQB1H472JZ	P.CAPACITOR 50V 4700P	1	
C7804		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7805		ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C7806		ECQB1H333JZ	P.CAPACITOR 50V 0.033U	1	
C7815		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C7816		ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C7851		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7852		ECEA1AK101	E.CAPACITOR 10V 100U	1	
C7853,54		ECCF1H330JC	C.CAPACITOR 50V 33P	2	
C7855,56		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C7860		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
D301		MA4091M	DIODE	1	
D710		MA3100L	DIODE	1	
D771		MA151WK	DIODE	1	
D772		MA165	DIODE	1	
D773		11ES1	DIODE	1	
D1001,02		MA165	DIODE	2	
D2003,04		MA165	DIODE	2	
D2007,08		MA165	DIODE	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D2403		MA165	DIODE	1	
D2405,06		MA165	DIODE	2	
D3001		MA165	DIODE	1	
D3009		MA165	DIODE	1	
D3101		MA165	DIODE	1	
D3102		MA29W-A	DIODE	1	
D3901,02		MA165	DIODE	2	
D4003		MA165	DIODE	1	
D6001		MA4051	DIODE	1	
D6002-04		MA165	DIODE	3	
D6005		ERA15-01	DIODE	1	
D6006		MA165	DIODE	1	
D6008		MA723	DIODE	1	
D6009		MA4150L	DIODE	1	
D6023		MA165	DIODE	1	
D7401,02		MA723	DIODE	2	
D7672,73		MA3150H	DIODE	2	
D7851		MA165	DIODE	1	
DL803		EFDWF124A13A	DELAY	1	
F6001		VSF0077	FUSE	1	<!>
FL301		ELB4M022	FILTER	1	
FL302		VLF0499	FILTER	1	
FL303		VLF0727	FILTER	1	
FL801		ELB4W002	FILTER	1	
FL851		VLF0143	FILTER	1	
FL3101		VLF0413	FILTER	1	
IC301		VEFH03D	HIC	1	
IC303		MSM6965-3RS	IC	1	
IC701		M51366SP	IC	1	
IC801		VEFH04F	P.C.BOARD	1	
IC802		M52055P	IC	1	
IC851		BA7025L	IC	1	
IC2001		MN6740VCTK	IC	1	
IC2101		XRA6435S	IC	1	
IC2201		NA3814K	IC	1	
IC3101		BA7004	IC	1	
IC3801		M52063SP	IC	1	
IC3901		LA7150	IC	1	
IC4001		XRA7766AS	IC	1	
IC6003		MN12821R	IC	1	
IC7801		SAA4700	IC	1	
IC7851		MN158413VSSY	IC	1	
IC7852		MN1280S	IC	1	
J701		VJR0231	PACK PIN	1	
J702,03		VJR0406	PACK PIN	2	
J704		VJR0231	PACK PIN	1	
KR851		VJR0163	PACK PIN	1	
L301		VLQEL05F101K	COIL 100UH	1	
L302		VLQEL05F220K	COIL 22UH	1	
L303,04		VLQEL05F101K	COIL 100UH	2	
L306		VLQEL05F101K	COIL 100UH	1	
L307		VLQEL05F151K	COIL 150UH	1	
L308		VLQEL05F270K	COIL 27UH	1	
L309,10		VLQEL05F101K	COIL 100UH	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L311		VLQEL05F2R2K	COIL 2.2UH	1	
L701,02		ELESP680KA	COIL 68UH	2	
L711		ELQTR68XB	COIL 0.68UH	1	
L712		VLQ0305J1R2	COIL 1.2UH	1	
L714		VLQ0305J1R2	COIL 1.2UH	1	
L715		VLQ0213K680	COIL 68UH	1	
L716		ELESP560KA	COIL 56H	1	
L717,18		ELESP680KA	COIL 68UH	2	
L719		ELESP120KA	COIL 12UH	1	
L781		ELESP680KA	COIL 68UH	1	
L805		VLQEL05F101K	COIL 100UH	1	
L806		VLQEL05F681K	COIL 680UH	1	
L808		VLQEL05F470K	COIL 47UH	1	
L809		VLQEL05F391K	COIL 390UH	1	
L810		VLQEL05F101K	COIL 100UH	1	
L811		VLQEL05F470K	COIL 47UH	1	
L812		VLQEL05F681K	COIL 680UH	1	
L820		VLQEL05F101K	COIL 100UH	1	
L821		VLQEL05F150K	COIL 15UH	1	
L822		VLQ0213K150T	COIL 15H	1	
L851		VLQEL05F101K	COIL 100UH	1	
L2002		VLP0074	COIL	1	
L2003		ELESP101KA	COIL 100UH	1	
L2101		ELESP102KA	COIL 1000UH	1	
L3001-03		ELESP101KA	COIL 100UH	3	
L3005		ELESP120KA	COIL 12UH	1	
L3006		ELESP6R8KA	COIL 6.8UH	1	
L3007		ELESP101KA	COIL 100UH	1	
L3008		ELESP3R3KA	COIL 3.3UH	1	
L3101		VLQEL05F101K	COIL 100UH	1	
L3805		VLQEL05F101K	COIL 100UH	1	
L3901		VLQEL05F1R0K	COIL 1UH	1	
L3902		VLQEL05F2R7K	COIL 2.7UH	1	
L3903		VLQEL05F1R0K	COIL 1UH	1	
L3904		VLQEL06F471K	COIL 470UH	1	
L4001		VLQEL07F822J	COIL 8200UH	1	
L4002		ELESP471KA	COIL 470UH	1	
L6101		VLQEL05F101K	COIL 100UH	1	
L7401		ELESP1R0KA	COIL 1UH	1	
L7402		ELESP101KA	COIL 100UH	1	
L7403		VLP0085	FILTER	1	
L7404		ELESP1R0KA	COIL 1UH	1	
L7405		ELESP101KA	COIL 100UH	1	
P001		VJS1237T	CONNECTOR (FEMALE)	1	
P006		VJS1902	CONNECTOR (FEMALE)	1	
P501		VJS1743T	CONNECTOR (FEMALE)	1	
P1001		VJS2571A013	CONNECTOR (FEMALE)	1	
P2001		VJP1932T	CONNECTOR (MALE)	1	
P2001		VJS1932T	CONNECTOR (FEMALE)	1	
P2201		VJP1237T	CONNECTOR(MALE) 10P	1	
P2201		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJP1237T	CONNECTOR(MALE) 10P	1	
P3001		VJS1743T	CONNECTOR (FEMALE)	1	
P3902		VJS1469	CONNECTOR (FEMALE)	1	
P4001		VJP2622	CONNECTOR	1	
P6001		VJS2571A012	CONNECTOR (FEMALE)	1	
P6002		VJS2571A004	CONNECTOR (FEMALE)	1	
P7401		VJS1662	CONNECTOR (FEMALE)	1	
P7402		VJS2571A015	CONNECTOR (FEMALE)	1	
PK1		VJR0189	PACK PIN	1	
PK2201		VJR0452	PACK PIN	1	
PK2202		VJR0348	PACK PIN	1	
PK3901		VJR0348	PACK PIN	1	
PK3902		VJR0523	PACK PIN	1	
PK3903		VJR0348	PACK PIN	1	
PK3904		VJR0416	PACK PIN	1	
PK6101		VJR0277	PACK PIN	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q301		MSB709-R	TRANSISTOR	1	(Q,R,S)
Q302		MSC2295-C	TRANSISTOR	1	(B,C)
Q303		MSC2295-C	TRANSISTOR	1	(B,C)
Q304		MSD601-R	TRANSISTOR	1	(Q,R,S)
Q703		2SD601	TRANSISTOR	1	(S,T)
Q710		2SC2377	TRANSISTOR	1	(C,D)
Q712		2SD638	TRANSISTOR	1	
Q713		2SD1328	TRANSISTOR	1	(S)
Q771		2SD601	TRANSISTOR CHIP	1	(S,T)
Q804		MSB709-R	TRANSISTOR	1	(Q,R,S)
Q2001		MSD601-R	TRANSISTOR	1	(Q,R,S)
Q2002		2SD1996	TRANSISTOR	1	(S)
Q2003		MSB709	TRANSISTOR	1	
Q3001		MSC2295	TRANSISTOR	1	
Q3003		MSD601	TRANSISTOR	1	
Q3004		MSB709-R	TRANSISTOR	1	(Q,R,S)
Q3006		MSC2295	TRANSISTOR	1	
Q3007		MSB709-R	TRANSISTOR	1	(Q,R,S)
Q3101		MSD601	TRANSISTOR	1	
Q4001		MSD602-R	TRANSISTOR	1	(R)
Q6001		2SD893	TRANSISTOR	1	
Q6002,03		2SD1994	TRANSISTOR	2	(S)
Q6004		2SD1992	TRANSISTOR	1	
Q6006		2SB1321	TRANSISTOR	1	
Q6007		MSB710-R	TRANSISTOR	1	(R,S)
Q6008		2SD1273-P	TRANSISTOR	1	
Q6010		2SD1991A	TRANSISTOR	1	
Q6011		MSB709	TRANSISTOR	1	
Q6101		2SC2206	TRANSISTOR	1	(B,C)
QR304		MRN1403	TRANSISTOR-RESISTOR	1	
QR701		MRN1404	TRANSISTOR-RESISTOR	1	
QR702		MRN1404	TRANSISTOR-RESISTOR	1	
QR711,12		MRN1403	TRANSISTOR-RESISTOR	2	
QR714		MRN1402	TRANSISTOR-RESISTOR	1	
QR853		UN1213	TRANSISTOR-RESISTOR	1	
QR1001		MRN1404	TRANSISTOR-RESISTOR	1	
QR2002		DTC363EK	COMBI.TR-R	1	
QR2004		2SD1676	TRANSISTOR-RESISTOR	1	
QR2005		MRN1404	TRANSISTOR-RESISTOR	1	
QR2402,03		MRN2403	TRANSISTOR-RESISTOR	2	
QR3004		MRN2402	TRANSISTOR-RESISTOR	1	
QR3008		MRN1404	TRANSISTOR-RESISTOR	1	
QR3801		MRN2404	TRANSISTOR-RESISTOR	1	
QR3802		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001		MRN1404	TRANSISTOR-RESISTOR	1	
QR6002		UN2119	TRANSISTOR-RESISTOR	1	
QR6003		MRN2404	TRANSISTOR-RESISTOR	1	
QR6004		MRN1404	TRANSISTOR-RESISTOR	1	
QR6007		MRN1403	TRANSISTOR-RESISTOR	1	
QR6011,12		MRN1403	TRANSISTOR-RESISTOR	2	
QR6013		MRN2404	TRANSISTOR-RESISTOR	1	
QR7401		MRN1402	TRANSISTOR-RESISTOR	1	
QR7851		UN1211	TRANSISTOR-RESISTOR	1	
QR7852		UN1213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R301		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R302		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R303		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R304		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R305		ERJ6GMYJ824	M.RESISTOR CH 1/10W 820K	1	
R306		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R307		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R308		ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R309		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R310		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R311		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R312		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R317		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R320		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R325		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R326		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R327		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R328		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R329		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R330		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R331		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R332		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R334,35		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R338		ERJ6GMYJ124	M.RESISTOR CH 1/10W 120K	1	
R339		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R712		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	1	
R713		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R714		ERD2FCG330	C.RESISTOR 2W 33	1	
R715		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R716		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R717		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R718		ERJ6GEYJ754	M.RESISTOR CH 1/10W 750K	1	
R719,20		ERJ6GEYJ682	M.RESISTOR CH1/10W 6.8K	2	
R721		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R722		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R723		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R724		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R725		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R726		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R727		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R728		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R729,30		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
R737		ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R738		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R739		ERJ6GEYJ681	M.RESISTOR CH1/10W 680	1	
R740		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R741		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R743		ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R744		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R745		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R746		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R747		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R750		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R757		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R758		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R759		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R763		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R764		ERJ6GEYJ822	M.RESISTOR CH1/10W 8.2K	1	
R772		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R781		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R782		ERJ6GEYJ821	M.RESISTOR CH1/10W 820	1	
R792		ERDS2TJ120	C.RESISTOR 1/4W 12	1	
R795		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R815		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R816		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R818		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R819		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R820		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R821		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R822		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R824		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R825		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R831		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R841-43		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	3	
R844,45		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R846,47		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	2	
R851		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R852		ERDS2TJ390	C.RESISTOR 1/4W 39	1	
R853		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R854		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R855		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R856		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R858		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R2001,02		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R2004,05		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2006		ERJ6GMY0R00	M.RESISTOR CH 1/10W 0	1	
R2007		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2008		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2009		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R2010		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2011		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2012		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2013		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2014		ERJ6GMYJ824	M.RESISTOR CH 1/10W 820K	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2017		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2018		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2019		ERJ6GMYJ124	M.RESISTOR CH 1/10W 120K	1	
R2020		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R2021		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2022		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2023		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2024		ERJ6GMYJ823	M.RESISTOR CH 1/10W 82K	1	
R2025		ERJ6GMYG562	M.RESISTOR CH 1/10W 5.6K	1	
R2026		ERJ6GMYG392	M.RESISTOR CH 1/10W 3.9K	1	
R2027		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R2028		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2029		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R2030		ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R2031		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2032		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R2034		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2035,36		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2037		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2040		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R2051		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2101-03		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2104		ERX12SJR47E	M.RESISTOR 1/2W 0.47	1	
R2105		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2106		ERJ6GMYG561	M.RESISTOR CH 1/10W 560	1	
R2107		ERJ6GMYG562	M.RESISTOR CH 1/10W 5.6K	1	
R2108		ERJ6GMYG472	M.RESISTOR CH 1/10W 4.7K	1	
R2109		ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	1	
R2201		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2202-04		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2205		ERX12SJR68E	M.RESISTOR 1/2W 0.68	1	
R2402		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R2403		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2405		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3001		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3002		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3003		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3019		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3022,23		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	2	
R3028		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3029		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3030		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3042		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3062		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3063		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3071		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3085		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R3086		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3087,88		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	2	
R3094		ERJ6GMY0R00	M.RESISTOR CH 1/10W 0	1	
R3095		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3096		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3101		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3102		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3103		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3104		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3105		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3812		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3813		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3814		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R3815		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R3816		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3817		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R3818		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3819		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3820		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3821		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3822,23		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	2	
R3901		ERJ6GEYJ750	M.RESISTOR CH1/10W 75	1	
R3902		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3903,04		ERJ6GEYJ242	M.RESISTOR CH 1/10W 2.4K	2	
R3905		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3906		ERJ6GEYJ273	M.RESISTOR CH1/10W 27K	1	
R3908		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3909		ERJ6GEYJ750	M.RESISTOR CH1/10W 75	1	
R3910		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3912		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R3913		ERJ6GEYJ123	M.RESISTOR CH1/10W 12K	1	
R3916		ERDS2T0	C.RESISTOR 1/4W 0	1	
R4001		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R4002		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R4003		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4004		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4007		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4008		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4010		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R4012		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4013		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4014		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R4015		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4016		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4017		ERJ6GMYJ302	M.RESISTOR CH 1/10W 3K	1	
R4018		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4019		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R4020		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4023		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R4024,25		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4026		ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R4027		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4028		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R4031		ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R4032		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4035		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4038		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R4042		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4044		ERJ6GMY0R00	M.RESISTOR CH 1/10W 0	1	
R4049		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4050		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6001-03		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	3	
R6004,05		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6006		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6007		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R6008		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6009		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6010		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6011		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6013		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6014		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6015		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6017		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R6018		ERJ6GMYJ131	M.RESISTOR CH 1/10W 130	1	
R6019		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6020		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6021		ERJ6GMYJ201	M.RESISTOR CH 1/10W 200	1	
R6022		ERG3SJ220	M.RESISTOR 3W 22	1	
R6023		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R6024		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6025		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R6026		ERD2FCVG220	C.RESISTOR 2W 22	1	
R6028		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6029		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R6039		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6040		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6041		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6042,43		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R6044,45		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6047		ERDS1TJ332	C.RESISTOR 1/2W 3.3K	1	
R6048		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R6049		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6053		ERG2SJ471U	M.RESISTOR 2W 470	1	
R6054		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6055		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6056		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6057		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6059		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6060		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6062		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6101		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6102		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R6103,04		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R7401		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7402		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7656		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7801		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R7802		EROS2CKG7502	M.RESISTOR 1/4W 75K	1	
R7803,04		ERDS2TJ103	C.RESISTOR 1/4W 10K	2	
R7805		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R7806		EROS2CKG3601	M.RESISTOR 1/4W 3.6K	1	
R7807		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R7851		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7852		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R7860		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
T703		EIV5EC013A	TRANSFORMER	1	
T704		EIV5EC006A1	TRANSFORMER	1	
T710		EULBEF023	TRANSFORMER	1	
T711		EIS5EC004A	TRANSFORMER	1	
T851		ELM7Q207A	TRANSFORMER	1	
T4001		EIQ7QF014Q	TRANSFORMER	1	
VR302		EVN4YCA00B23	V.RESISTOR 2K	1	
VR701,02		EVN4YCA00B23	V.RESISTOR 2K	2	
VR741		EVNDRAA00B14	V.RESISTOR 10K	1	
VR751		EVNDRAA00B53	V.RESISTOR 5K	1	
VR803		EVNDRAA00B14	V.RESISTOR 10K	1	
VR2001		EVNDRAA00B54	V.RESISTOR 50K	1	
VR2009,10		EVND1AA00B25	V.RESISTOR 200K	2	
VR3012		EVNDRAA00B52	V.RESISTOR 500	1	
VR3801		EVN4YCA00B14	V.RESISTOR 10K	1	
VR4002		EVNDRAA00B25	V.RESISTOR 200K	1	
X301		VSX0225	CRYSTAL OSCILLATOR	1	
X710		EFCH38MSP2	CRYSTAL OSCILLATOR	1	
X711		EFCS5R5MW5	CRYSTAL OSCILLATOR	1	
X712		EFCS5R5MS5	CRYSTAL OSCILLATOR	1	
X715		ELB5A043	CRYSTAL OSCILLATOR	1	
X716		EFCA31R90M1	CRYSTAL OSCILLATOR	1	31.75MHZ
X717		EFCA40R40M1	CRYSTAL OSCILLATOR	1	
X801		VSX0162	CRYSTAL OSCILLATOR	1	
X3101		VSX0099	CRYSTAL OSCILLATOR	1	
X6101		VSX0409	CRYSTAL OSCILLATOR	1	
X7401		VSQ0565	CRYSTAL OSCILLATOR	1	
X7851		EFOA4R0M03C2	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VMC0075	HEAT SINK FIX SPRING	1	
		VSC2734	HEAT SINK	1	
		VMP2631	FUSE FIX ANGLE	1	
		VSC1068	HEAT SINK	1	
		VMA6768	EARTH ANGLE	1	
		ENC17976	RF CONVERTER	1	<!>
		VEJ0989	ANT. TERMINAL PLATE	1	
		VMZ1352	HEAT SINK COVER	1	
		VJF0379	CLAMP	1	
		VJF0858	CLAMP	1	
		VMC0462	EARTH SPRING	1	[FOR SUB MAIN]

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		ENV57850H6	TUNER	1	<!>
		VSC2713	SHIELD (MAIN)	1	[FOR TV DEMODU.]
		VSC2712	SHIELD (TOP)	1	[FOR TV DEMODU.]
		VSC2714	SHIELD (BOTTOM)	1	[FOR TV DEMODU.]
		VEJ0779	REAR JACK	1	[SUPPLIED FROM M.B.V]
		VWJ14HW125MM	FLEXIBLE CABLE(14PIN)	1	(P7401-P7501)
		VWJ0455	FLEXIBLE CABLE(15PIN)	1	(P7402-P7502)
	■	VEP07597B	TIMER C.B.A.		(NLA)
			CAPACITORS		
C6701		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6702		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C6703		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6704		ECEA1HK3R3I	E.CAPACITOR 50V 3.3U	1	
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C7503		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7504		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7505		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C7506		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C7507		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C7508		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C7510		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7511		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7512		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C7513		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7525		ECUM1H821KBN	C.CAPACITOR CH 50V 820P	1	
C7551		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
D6701		PN323B	PHOTO DIODE	1	
D7501		MA4068	DIODE	1	
D7504		MA165	DIODE	1	
D7507		MA165	DIODE	1	
D7510,11		MA165	DIODE	2	
D7513		MA165	DIODE	1	
D7516		MA165	DIODE	1	
D7530		MA165	DIODE	1	
D7532-35		MA165	DIODE	4	
D7537-41		MA165	DIODE	5	
D7556		LN38GCPL	DIODE	1	
DP7501		VSL0164	DISPLAY TUBE	1	
IC7501		MN187125VHP	IC	1	
IC7502		MN12C261D	IC	1	
IC7503		MN1280L	IC	1	
IC7504		MN1280S	IC	1	(S)
IC7601		UPC1490HA	IC	1	
L7501		VLQEL05F221K	COIL 220UH	1	
P7501		VJS1492	CONNECTOR(FEMALE)	1	
P7502		VJS2651	CONNECTOR	1	
P7505		VJS2652	CONNECTOR	1	
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR7525		UN2216	TRANSISTOR	1	
			RESISTORS		
R6701		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R6702		ERDS2TJ8R2	C.RESISTOR 1/4W 8.2	1	
R6703		ERDS2TJ103T	C.RESISTOR 1/4W 10K	1	
R7501		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7502		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R7504		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7505		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R7508-10		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	3	
R7511		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7512		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R7523-27		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	5	
R7530-32		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7533		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7534		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7535		ERDS1TJ5R1	C.RESISTOR 1/2W 5.1	1	
R7538		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7546		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7549		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7550		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7552-54		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	3	
R7555		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7561,62		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
SW7504		EVQ11407K	SWITCH	1	
SW7517		EVQ11407K	SWITCH	1	
SW7527		EVQ11407K	SWITCH	1	
SW7532-46		EVQ11407K	SWITCH	15	
X7501		VSX0140	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0843	LED HOLDER	1	
		VJF0706	FIP HOLDER	1	
		VSC2059	SHIELD (MAIN)	1	(FOR IR RECEIVER)
		VSC1928	SHIELD (BOTTOM)	1	(FOR IR RECEIVER)
	■	VEP06680A	OPERATION C.B.A.		(NLA)
D6203		LN28RCPPU	DIODE	1	
P6201		VJP2652	CONNECTOR	1	
			RESISTORS		
R6201		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R6202		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
SW6201-07		EVQ11407K	SWITCH	7	
SW6211		VSS0187	SWITCH	1	
SW6213		VSS0236	SWITCH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
VR3004		EWAKFKXB3B24	V.RESISTOR 20K	1	
			MISCELLANEOUS		
		VGU4537	SWITCH KNOB	2	
	■	VEP05137B	HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C501		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C502		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C505		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C507		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C508		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C510,11		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C512		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C513		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C514		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C515		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C516		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C517		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C518		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C523		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C524		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C525		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C528		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C529		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C530		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C531		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C532		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C533		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C534		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C538		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C539		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C540		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C541		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C542		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
IC501		BA7274S	IC	1	
L501		VLQEL05F101K	COIL 100UH	1	
L503		VLQEL05F270K	COIL 27UH	1	
L504		VLQEL05F101K	COIL 100UH	1	
L505		VLQEL05F820K	COIL 82UH	1	
L506		VLQEL05F151K	COIL 150UH	1	
P002		VJS1449	CONNECTOR(FEMALE)	1	
P501		VJP1237T	CONNECTOR(MALE) 10P	1	
Q501		2SB709	TRANSISTOR CHIP	1	(Q,R,S)
Q502		2SC2295	TRANSISTOR	1	
			RESISTORS		
R501		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R503		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R504		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R507		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R508		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R509		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R510		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R512		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R513		ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	1	
R518		ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	1	
R519		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R523		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R524		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R525		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R526		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R527		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R528		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R532		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R533		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R534-36		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	3	
VR501		EVND1AA00B23	V.RESISTOR 2K	1	
VR502		EVND1AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC2353	SHIELD (TOP)	1	
		VSC2355	SHIELD (BOTTOM)	1	
		VSC2354	SHIELD (MAIN)	1	
	■	VEP01420AB	POWER C.B.A.		<!> (NLA)
			CAPACITORS		
C1101		ECQU2A154MNB	P.CAPACITOR 100V 0.15U	1	
C1102		ECQU2A104MN	P.CAPACITOR 100V 0.01U	1	
C1108		ECOS2GU820	P.CAPACITOR 200V 82U	1	
C1109		ECEA2GG010	E.CAPACITOR 400V 1U	1	
C1110		ECQE6473JZ	P.CAPACITOR 630V 0.047U	1	
C1111		ECKD3D331KBN	C.CAPACITOR 2KV 330P	1	
C1113		ECQB1H472KZ	P.CAPACITOR 50V 4700P	1	
C1114		ECA1CXLV470	E.CAPACITOR 16V 47U	1	
C1115		ECQB1H472KZ	P.CAPACITOR 50V 4700P	1	
C1117		ECQP1101JZ	P.CAPACITOR 100V 100P	1	
C1118		ECEA1HGE101	E.CAPACITOR 50V 100U	1	
C1119,20		ECEA1DFZ681X	E.CAPACITOR 20V 680U	2	
C1121		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1122		ECEA1AFZ331X	E.CAPACITOR 10V 330U	1	
C1123		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1124,25		ECEA1AGE101	E.CAPACITOR 10V 100U	2	
C1126		ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1127		ECA0JFZ471	E.CAPACITOR 6.3V 470U	1	
C1128-31		ECKF1H103ZFB	C.CAPACITOR 50V 0.01U	4	
C1132		ECEA1CGE100	E.CAPACITOR 16V 10U	1	
C1134,35		ECKF1H103ZFB	C.CAPACITOR 50V 0.01U	2	
C1136		ECQV1H105JZ	P.CAPACITOR 50V 1U	1	
C1137		ECQV1H223JS	P.CAPACITOR 50V 0.022U	1	
C1142		VCC0021	CAPACITOR	1	
C1145		VCC0021	CAPACITOR	1	
C1147		VCC0022	C.CAPACITOR 1000P	1	
D1102		S1WBA60	DIODE	1	
D1103		VSD0002	DIODE	1	
D1104		AP01C	DIODE	1	
D1105		MA178	DIODE	1	
D1106		MA4039	DIODE	1	
D1107		MA165	DIODE	1	
D1108		ERA22-02	DIODE	1	
D1109		RL2ZP	DIODE	1	
D1110		MA185	DIODE	1	
D1111		11EQS04	DIODE	1	
D1112		ERB83-004L17	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D1113		MA2200B	DIODE	1	
D1114		MA4130L	DIODE	1	
IC1101		STRD1816	IC	1	
IC1102		STK5392	IC	1	
L1101,02		ELF18D290A	COIL	2	
L1103		VLQ0410	COIL	1	
L1104-07		VLP0085	FILTER	4	
P1101		VJS2651	CONNECTOR	1	
P1102		VJS2625	CONNECTOR (FEMALE)	1	
Q1102		2SD1330	TRANSISTOR	1	
			RESISTORS		
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	
R1102,03		ERDS1TJ823	C.RESISTOR 1/2W 82K	2	
R1104		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R1106		ERG3ANJ683	M.RESISTOR 3W 68K	1	
R1108		ERD2FCVG182	C.RESISTOR 1/4W 1.8K	1	
R1110		ERG2SJ330	M.RESISTOR 2W 33	1	
R1111		ERG2SJ181	M.RESISTOR 2W 180	1	
R1113		ERG1SJ182E	M.RESISTOR 1W 1.8K	1	
R1114		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R1118		ERDS2TJ1R0	C.RESISTOR 1/4W 1.0	1	
R1123,24		ERDS2TJ153	C.RESISTOR 1/4W 15K	2	
R1125		ERW1PK2R2	W.RESISTOR 1W 2.2	1	
T1101		VLT0571	TRANSFORMER	1	<!>
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	
		VMZ1183	CAPACITOR COVER	1	
		VMZ0913	CAPACITOR COVER	1	
	■	VEP66125E	REMOTE CONTROL UNIT C.B.A.		(NLA)
			CAPACITORS		
C6801		ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C6802		ECUM1E104ZFM	C.CAPACITOR CH 25V 0.1U	1	
C6803		ECEV1CAN4R7R	E.CAPACITOR 16V 4.7U	1	
C6804		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6808,09		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6810		ECUM1E104ZFM	C.CAPACITOR CH 25V 0.1U	1	
C6811		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C6812		ECUM1E154ZFM	C.CAPACITOR CH 25V 0.15U	1	
D6801		SE303ACYTF	DIODE	1	
D6803-11		MA221	DIODE	9	
D6813		MA221	DIODE	1	
D6817,18		MA221	DIODE	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IC6801		MN158455VSSD	IC	1	
IC6802		AN8356S	IC	1	
L6801		ELT3K017B	COIL H	1	
Q6801		2SD1328	TRANSISTOR CHIP	1	(R,S)
Q6802		MSB709-R	TRANSISTOR	1	
Q6803		MSD601-R	TRANSISTOR	1	
QR6803		DTC144TK	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R6802,03		ERJ6GMYJ474	M.RESISTOR CH 1/10W 470K	2	
R6804		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R6805		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R6806		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R6807		ERJ8GCYJ1R2	M.RESISTOR CH 1/8W 1.2	1	
R6808		ERJ6GMYJ824	M.RESISTOR CH 1/10W 820K	1	
R6810		ERJ6GMYJ184	M.RESISTOR CH1/10W 180K	1	
R6812		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R6813		ERJ6GMYJ6R8	M.RESISTOR CH 1/10W 6.8	1	
R6814,15		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R6816		ERJ6GMYJ334	M.RESISTOR CH 1/10W 330K	1	
R6817		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
SN6801		VSQ0567	SENSOR	1	
VR6801		EVNDXAA00B34	V.RESISTOR 30K	1	
X6801		EFOGC3524A4	CRYSTAL OSCILLATOR	1	
X6802		EFBAL30D401K	BUZZER	1	
			MISCELLANEOUS		
		VGQ1406	TERMINAL BASE	1	
		VJR0401	TERMINAL ANGLE	2	
	■	VXA3820	MECHANISM CONNECTION C.B.A.		(NLA)
IC1501		ON2170	IC	1	
R1501,02		ERJ8GCYJ223	CHIP 1/8W 22K	2	
P1504		VJS2342W	CONNECTOR 13P	1	
P1505		VJP1242T	CONNECTOR 2P	1	
			MISCELLANEOUS		
		VMA7844	REINFORCEMENT PLATE(F)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VMA7845	REINFORCEMENT PLATE(R)	1	
		VMZ1366	PROTECTION SHEET	1	
	■	VEK3578	SUPPLY PHOTO Tr. C.B.A.		(NLA)
C1501		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
Q1501		PN150NVS	TRANSISTOR	1	
			MISCELLANEOUS		
		VMD0645	PHOTO Tr. HOLDER	1	
	■	- - - -	TAKE-UP PHOTO Tr. C.B.A.		
C1502		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
P1503		VJS2165W	CONNECTOR 6P	1	
Q1502		PN150NVS	TRANSISTOR	1	
R1503		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
			MISCELLANEOUS		
		VMD0645	PHOTO Tr. HOLDER	1	